SHURE

444
MICROPHONE

Operator Manual

VINTAGE MANUALS
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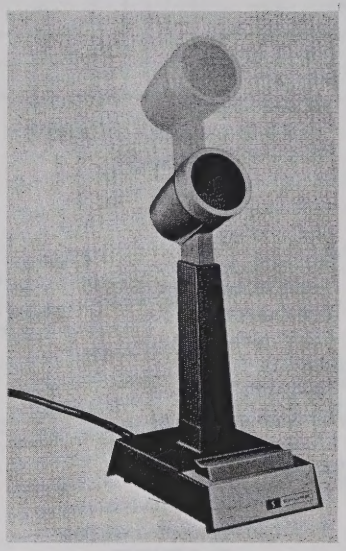
SHURE
222 HARTREY AVE., EVANSTON, IL. 60204 U.S.A.
MICROPHONES AND ELECTRONIC COMPONENTS
AREA CODE 312/328-9000 • CABLE: SHUREMICRO

DATA SHEET

MODEL 444 COMMUNICATIONS MICROPHONE

MODEL 444 COMMUNICATIONS MICROPHONE

General: The Model 444 is specifically designed for radio communication applications and provides optimum performance from single sideband transmitters as well as AM and FM units. The response cuts off sharply below 300 Hertz and above 3,000 Hertz, with a rising characteristic to 3,000 Hertz. This special response characteristic results in optimum speech intelligibility and audio punch to cut through noise and interference.



The Model 444 features:

1. A response tailored for single sideband transmissions.
2. A switch for instantaneous selection of press-to-talk or VOX (voice-operated relay control) operation.
3. Finger-Tip Control Bar (locking or non-locking action) to actuate microphone and an external relay or control circuit.
4. Long-life switch to satisfy severe requirement of communication systems.
5. Adjustable microphone height.
6. A sturdy, high impact "Armo-Dur®" base and microphone case.
7. Dependability—under all operating conditions.

Press-to-talk Switch Operation: The Finger-Tip Control Bar can be used in a locking or non-locking switch action. To use as a non-locking switch, simply depress the Control Bar and release after transmission. To use as a locking switch, depress the Control Bar, move forward by pulling with the finger tips; to unlock switch, move Control Bar in a backward direction and remove pressure from the bar.

Connections: Figure B shows the internal wiring of the Model 444 Microphone.

Most amateur equipment is wired to use either VOX (voice-operated relay control) or a press-to-talk switch. The Model 444 has been designed to provide maximum flexibility for both types of operation. VOX or press-to-talk operation may be easily selected by the slide switch on the bottom side of the microphone base near the cable entry. With the switch in the press-to-talk position, the normally open section of the switch controls the relay. In the VOX position, the switch will mute the microphone only and the microphone can be VOX operated.

The microphone may be connected to an amplifier input of 100,000 ohms or more. The black conductor is the "hot" lead of the microphone circuit and the white conductor is connected to an external control circuit.

The shield is connected to the metal parts of the microphone and is common to the microphone circuit and the control circuit. The shield should be securely grounded to a water pipe or similar ground to eliminate shock hazard to the user.

Important: Shure Microphone Cables are selected after exhaustive tests to insure superior performance in microphones because of low capacities, superior shielding properties and unusually long life under severe use.

Cables with plastic insulation should not be subjected to excessive soldering-iron heat. Carefully clean and tin the conductors and the connections to which the conductors are to be soldered. The soldering operation can then be done with a minimum of heat, thereby avoiding any possibility of damage to the cable.

Replacement Cartridge: Model R5R

Guarantee: This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from the date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor.

Shipping Instructions: Carefully repack the unit and return it prepaid to the factory. If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.

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27A245 (KI)

Printed in U.S.A.
U.S. Patent D-198,850

(OVER)

SPECIFICATIONS

Type:
Controlled Magnetic

Frequency Response:
200 to 6,000 Hz. (See Figure A)

Polar Pattern:
Semidirectional

Microphone Rating Impedance:
High

Voltage Sensitivity:
1,000 Hz. response
Open circuit voltage .....— 53.0 db* (2.25 mv)
Loaded with 100,000 ohm ..— 54.0 db*
EIA Microphone Rating Gm
(Sensitivity) .....—143.0 db**

*0 db = 1 volt per microbar
**0 db = EIA Standard SE-105, August 1949

Switch:
Press-to-talk switch—locking or non-locking operation—to operate microphone circuit or external control circuit.

Cable:
Non-detachable 7 foot (2.1 meter), two-conductor shielded plastic jacketed cable.

Finish:
Gray (two tone)

Dimensions:
See Figure C

Net Weight:
1½ pounds (680 grams)

Shipping Weight:
2⅛ pounds (964 grams)

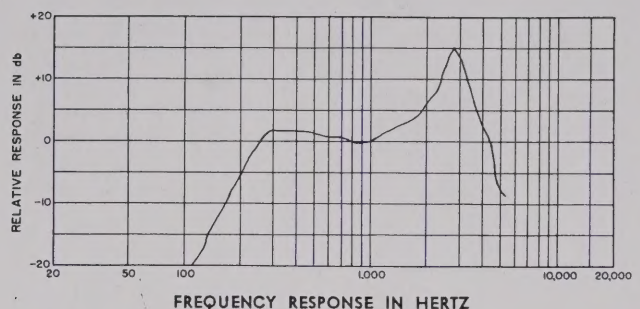
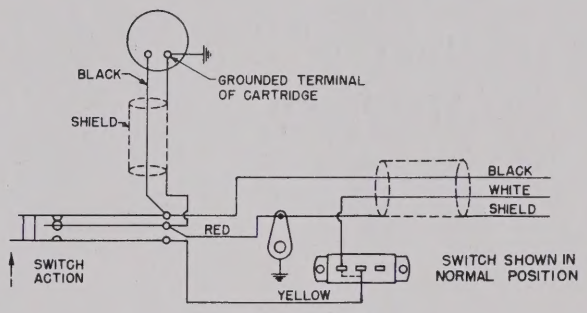
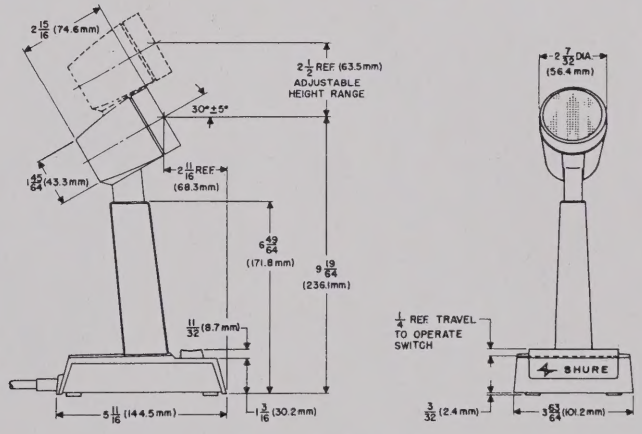


FIGURE A



INTERNAL CONNECTIONS
FIGURE B



OVERALL DIMENSIONS
FIGURE C

SHURE®

Use the Microphones of the STARS

CB AND AMATEUR RADIO WIRING GUIDE

January, 1978

Issue 3

222 HARTREY AVE., EVANSTON, IL. 60204 U.S.A.

SHURE MICROPHONES AND ELECTRONIC COMPONENTS

® AREA CODE 312/866-2200 • CABLE: SHUREMICRO
TWX: 910-231-0048 TELEX: 72-4381

SUPPLEMENT 1 TO ISSUE 3, CB AND AMATEUR RADIO WIRING GUIDE

Model (526T Series II / others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
AIRLINE							
775, GEN-774A	#1	#2	#3	#4	#2	NC	1, 2
ALARON							
B-4075, B-5050A	#1	#4	NC	#2	#3	#5	6
B-4900	#2	#1	#4	#3	#1	NC	1, 2
AUTOMATIC							
CBR-2175	#1	#3	#5	#2	#3	NC	1, 2
B&K/DYNASCAN							
Cobra 46XLR, 86XLR, 132XLR, 135XLR	#2	#1	NC	#3	#1	NC	2
Cobra 47XLR, 50XLR, 55XLR							8
BOMAN							
CB-515,-555,-725, -910,-930	#1	#2	#3	#4	#2	NC	1, 2
CB-720B	#1	#4	#3	#2	#4	NC	1, 2
CB-750	#2	#1	NC	#3	#1	NC	1, 2
CB-775	#2	#4	#1	#3	#4	NC	1, 2
CBR-9940	#1	#3	NC	#2	#3	NC	2

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

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27A1458 (RH)

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Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
CHANNEL MASTER							
CB6832	#2	#4	#1	#3	#4	NC	1, 2
CLARION							
RE-367E							8
COLT							
290, 480, 800, 1000, Black Shadow SSB	#1	#2	#3	#4	#2	NC	1, 2
350 (M-374)	#4	#2	#1	#5	#2	NC	1, 2
900	#1	#3	#4	#2	#3	NC	4
CONVOY							
CON-400	#4	#2	#1	#5	#2	NC	1, 2
CON-450	#1	#6	#3	#5	#4	#2	6
COURIER							
Blazer 40D, Caravelle 40D, Classic PLL40, Conqueror 40D, Rangler 40D, Renegade 40, Rogue 40	#2	#4	#1	#3	#4	NC	1, 2
Centurion SSB	TIP	SLEEVE	NC	RING	SLEEVE	NC	
Nightrider 40DR							8
Rebel PLL	WHT	GND	BLK	RED	GND	NC	1, 2
DELCO							
1977 Series	#1	#2	#3	#4	#2	NC	1, 2

ABBREVIATIONS

BLK = black
BLU = blue
BRN = brown
CHAS = chassis
CKT = circuit
CTR = center
GND = ground
GRN = green
HI = high
LO = low
LS = loudspeaker
MIC = microphone
NC = no connection
ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
FANON							
Fanfare 125F, 184DF, 185DF, 185PLL, 880DF	#2	#4	#1	#3	#4	NC	1, 2
Fanfare 190DF							8
Fanfare 350F	TIP	SLEEVE	NC	RING	SLEEVE	NC	
GEMTRONICS							
GT-44, GT-55, GTX-4040	#1	#2	#3	#4	#2	NC	1, 2
GENERAL ELECTRIC							
3-5810B, 3-5811B, 3-5818A, 3-5871A, 3-5871B	#4	#1	#5	#3	#1	NC	1, 2
3-5813A, 3-5814A, 3-5819A, 3-5825A, 3-5869A	#1	#2	#3	#4	#2	NC	1, 2
GM							
4120, 4145	WHT	SHLD	YEL	BLU	RED	BLK	6
4175	#1	#6	#4	#5	#2	#3	6
HANDIC							
605DL							9
HY-GAIN							
2679A							8
2680, 2681, 2682, 2701 (I), 2702 (II), 2703 (III)	#1	#3	#5	#2	#3	NC	1, 2
2705	#1	#4, #3	#5	#2	#3	NC	1, 2

NOTES

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2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
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Model	526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
ITT								
4400M		#1	#2	#3	#4	#2	NC	1, 2
RAY JEFFERSON								
CB-740		#1	#2	#4	#3	#2	NC	1, 2
E.F. JOHNSON								
Messenger 4135		WHT	SHLD	YEL	BLU	RED	BLK	6
Messenger 4250		#2	#4	NC	#3	#4	NC	2
Viking 260, 270		#1	#6	#4	#5	#2	#3	6
KENWOOD								
TR-7400A		#1	#3	#4	#2	#4	NC	
KRACO								
KCB-1307		#1	#6	#2	#5	#4	#3	6
KCB-2320,-2340, -4010,-4020, -4030		#1	#2	#3	#4	#2	NC	1, 2
KCB-4070		#1	#2	#5	#3	#2	NC	1, 2
KCB-4088		#1	#2	#4	#3	#2	NC	1, 2
KRIS								
XL23A		#1	#2	#4	#3	#2	NC	1, 2
XL45		#1	#2	#4	#3	#2	NC	2
LAFAYETTE								
HB-640		#1	#3	#5	#2	#3	NC	1, 2
MEDALLION								
63-030								E
63-200,-240		#1	#2	#4, #5	#3	#2	NC	1, 2

ABBREVIATIONS

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MIC = microphone
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ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
MIDLAND							
13-976; 76-858, -863; 77-825, -830,-857	#1	#2	#3	#4	#2	NC	1, 2
76-886	#1	#3	#5	#2	#3	NC	1, 2
77-838,-849	#2	#6	#12	#4	#6	NC	1, 2
77-861,-899							8
77-883	#1	#2	#4	#3	#2	NC	1, 2
77-892	#1	#2, #4	#3	#6	#4	NC	1, 2
MOPAR							
4094173	#1	#2	#5	#3	#2	NC	
4094176, 4094177	#1	#2	#3	#4	#2	NC	1, 2
MOTOROLA							
T4000A, T4005A, T4010A, T4020A							8
PACE							
CB185; 8041, 8046	#1	#2	#3	#4	#2	NC	1, 2
2300C	#4	#3	#2	#1	#3	NC	1, 2
8008	#1	#2	NC	#4	#2	NC	1, 2
PAL							
Coyote 23	#1	#2	#3	#4	#2	NC	1, 2
PALOMAR							
SSB2900; 4100	#1	#2	#3	#4	#2	NC	1, 2
21	#2	#1	#4	#3	#1	NC	1, 2

NOTES

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2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
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9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
PANASONIC							
RJ-3050,-3250	#1	#2	#4	#3	#2	NC	1, 2
PEARCE-SIMPSON							
Lion 40, Tiger 40	#1	#2	#3	#4	#2	NC	1, 2
Leopard B	#1	#3	NC	#2	#3	NC	1, 2
PRESIDENT							
Adams, Madison, Old Hickory	#2	#1	#4	#3	#1	NC	1, 2
RCA							
14T260, 14T300, 14T301, 14T302, 14T304	#1	#2	#3	#4	#2	NC	1, 2
REALISTIC							
TRC-424,-452,-458, -466,-467,-468	#4	#1	#5	#3	#1	NC	1, 2
TRC-449,-457	#4	#1	NC	#3	#1	NC	1, 2
TRC-461							8
ROBERTS							
RCB-770	#1	#6	#5	#3	#6	NC	1, 2
ROBYN							
AM-500D, DG-130D, LB-120, SB-510D, SB-520D, SX-401, SX-402D, WV-110, 007-140	#1	#2	#4	#3	#2	NC	1, 2
GT-410D							8
T-240D	#1	#3	NC	#2	#3	NC	4

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MIC = microphone
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ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model (others) 526T Series II	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
ROYCE							
1-617,-662,-673, -675,-678	#1	#2	NC	#3	#2	NC	1, 2
1-621,-625,-648, -660,-680	#1	#2	#4	#3	#2	NC	1, 2
SBE							
39CB (Sidebander V), 40CB (Console V)	#2	#1	NC	#3	#1	NC	
41CB (Aspen)	#2	#1	#3	#4	#3	NC	3, 5, 7
43CB, 47CB (Stowaway)							8
49CB (Tahoe 40)	#4	#2	#1	#5	#2	NC	1, 2
M.H. SCOTT							
Daks Mark IX	#1	#2	#3	#4	#2	NC	
SEARS							
370-38050700	#4	#1	#3	#5	#1	NC	2
562-38200700; 934-36771500, -36772600	#4	#1	#5	#3	#1	NC	1, 2
934-38270700	#4	#1	NC	#3	#1	NC	
SHAKESPEARE							
GBS240	#1	#2	#3	#4	#2	NC	1, 2
SHARP							
CB-800,-2260	#1	#4	#3	#2	#4	NC	1, 2
CB-2460	#1	#3	NC	#2	#3	NC	1, 2

NOTES

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Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
SURVEYOR							
2610	#2	#1	#4	#3	#1	NC	1, 2
2620	#1	#2	#3	#4	#2	NC	1, 2
TEABERRY							
"T" Bear (4004), "T" Command, "T" Dispatch	#1	#2	#3	#4	#2	NC	1, 2
"T" Charlie	#2	#4	#1	#3	#4	NC	1, 2
"T" (4011)	#1	#3	#4	#2	#3	NC	4
TENNA							
A0902	#1	#4	#3	#2	#4	NC	1, 2
TRAM							
D12, D42	#2	#1	NC	#3	#1	NC	
TRUETONE							
CYJ4832A-87, CYJ4834A-87, MIC4737A-67 (23-4737-5)	#1	#2	#3	#4	#2	NC	1, 2
CYJ4837A-87	#1	#2, #4	#3	#6	#4	NC	1, 2
UTAC							
TRX-500	#1	#3	#4	#2	#3	NC	1, 2
VECTOR							
VI	#1	#4	#3	#2	#4	NC	1, 2
X	#1	#2	#3	#4	#2	NC	1, 2
770	#2	#1	#4	#3	#1	NC	2

ABBREVIATIONS

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GRN = green
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LO = low
LS = loudspeaker
MIC = microphone
NC = no connection
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PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

GENERAL

This Guide provides detailed instructions for connecting Shure Citizens Band microphones to most CB transceiver models. If your CB transceiver is not listed in the Guide, please send a schematic diagram of your CB transceiver to Shure Brothers Incorporated, 222 Hartrey Avenue, Evanston, IL 60204. The schematic will be returned along with wiring instructions for your particular microphone-transceiver combination.

All wiring information in the Guide pertains to Shure Models CB41, CB42, CB43, CB44, CB45, 526T, and 526T Series II. Only Model 526T Series II is designed for use with CB transceivers requiring five-conductor shielded cable.

The Shure CB Wiring Guide has been compiled as an aid to Shure CB customers. Shure is not liable for damage due to wiring errors, errors in the Guide, or for any consequential damages.

HOW TO USE THE GUIDE

CB transceiver manufacturers are listed alphabetically in the left column. Model numbers are listed below each manufacturer's name.

The following six columns are headed by the cable lead colors used in Shure Citizens Band microphones. The upper row of colors (upper case) refers to the cable leads used in the 526T Series II. The lower row of colors (lower case) refers to the leads used in the 526T, CB41, CB42, CB43, CB44, and CB45. (The GREEN, high-impedance audio lead is omitted from the column headings. See the next paragraph for connection instructions for the GREEN lead.) Under each lead color are instructions for connecting that lead to the CB transceiver connector or input circuit. A number used as a column entry (e.g., #1, #2, etc.) refers to a numbered connector pin. When a connector has unnumbered pins, or when the cable is wired directly to the CB transceiver input, identification of the circuit, along with color code if applicable, is provided in the entry under each Shure cable lead color. Typical connector numbering is shown in Figure 1.

The right column is headed Notes. When special considerations apply, a numbered entry in this column refers to the Notes listed at the bottom of the page. When a transceiver audio input requires a high-impedance microphone connection, Note 4 will appear in the last column. This indicates that the GREEN audio lead (instead of the WHITE) should be used in Models CB41, CB42, CB43, CB44, and CB45. When Notes 6 or 9 appear, only the 526T Series II is suitable for connection to that transceiver.

Refer to the bottom of the page for a list of abbreviations used.

TYPICAL CONNECTIONS TO CB TRANSCEIVER AUDIO INPUT

Shure Citizens Band microphones are suitable for replacement of most original equipment ceramic or dynamic, high- or low-impedance microphones. Shure Citizens Band microphone cables are wired so that the WHITE cable lead carries the preamplified or low-impedance audio output, and the GREEN cable lead carries the high-impedance audio output. If a microphone has both a GREEN and a WHITE cable lead, be sure to insulate the unused audio lead.

When replacing a ceramic microphone supplied with original equipment, the high-impedance connection will usually (but not always) be used. If your CB transceiver is not listed in the Guide, and you do not know whether a high- or low-impedance microphone is required, connect the microphone for low impedance (WHITE lead). Check whether there is sufficient output from your transceiver. If the modulation output is too low, reconnect the microphone for high impedance.

The shield completes the microphone audio circuit, and often also is the ground for the switching circuit. Connect the shield to chassis or circuit ground of the transceiver. Take care not to connect the shield to chassis ground for those models where the Guide specifies connection to either circuit ground or power supply.

TYPICAL CONNECTIONS TO CB TRANSCEIVER RELAY OR ELECTRONIC SWITCHING CIRCUIT

Grounded switching

Most CB transceivers employ a grounded circuit to switch from the receive to the transmit position. Shure Citizens Band microphones are wired for instant connection to grounded switching circuits. The microphone cable connections are as follows.

1. Connect the RED cable lead to the terminal used to complete the transmitter circuit.
2. A. In Models CB41, CB42, CB43, CB44, CB45, and 526T, connect the BLACK lead to the terminal used to complete the receiver circuit*.

   B. In Model 526T Series II, connect the YELLOW lead to the terminal used to complete the receiver circuit*.

   *This will usually be a ground return from the loudspeaker. If a microphone switching contact is not required for the loudspeaker ground, insulate the BLACK or YELLOW lead referred to in A or B.
3. In Model 526T Series II, the BLACK lead may occasionally be required for a separate receiver ground circuit in addition to the loudspeaker ground. In most cases, however, insulate the BLACK lead.
4. In Model 526T Series II, connect the BLUE lead to chassis or circuit ground of the transceiver. Take care not to connect the shield to chassis ground for those models where the Guide specifies connection to circuit ground.

Isolated switching

In some transceivers, an isolated circuit is required to switch power supply voltages rather than grounds.

Shure Models CB41, CB42, CB43, CB44, CB45, and 526T are suitable for transceivers that switch the power supply in the microphone only to the transmitter circuit. All these microphones except Model CB41 require internal modifications that are fully described in the data sheet. In Model CB41, move the Grounded-Isolated switch to the Isolated position.
Model 526T Series II is suitable for connection to transceivers that switch the power supply in the microphone from the receive to the transmit position, and for units that also require a separate switching contact for the loudspeaker ground return. No internal microphone modifications are needed.
The microphone cable connections for isolated switching circuits are as follows.

1. Modify the microphone (all models except 526T Series II) as described in the data sheet.
2. Connect the RED lead to the isolated terminal used to complete the transmitter circuit.
3. A. In Models CB41, CB42, CB43, CB44, CB45, and 526T, connect the BLACK lead to the terminal used for power supply voltage.

   B. In Model 526T Series II, connect the BLUE lead to the terminal used for power supply voltage.
4. In Model 526T Series II, connect the BLACK lead to the terminal used to complete the receiver circuit. If the power supply is not switched to the receiver circuit by a microphone switching contact, insulate the BLACK lead.
5. In Model 526T Series II, connect the YELLOW lead to the loudspeaker ground return. If a microphone switching contact is not required for the loudspeaker ground, insulate the YELLOW lead.

Special switching

Some transceivers (indicated by Note 9 in the last column) require special internal microphone modifications before cable connections are made. Only the 526T Series II is recommended for use with these transceivers. Refer to the microphone data sheet for general descriptions of the required internal changes. If you need further information, please write to Shure Brothers Inc.

TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	
	With nonamplified microphone CB41, CB42, CB43, CB44, CB45	With amplified microphone 526T, 526T Series II
Undermodulation	Poor or loose connections (check especially microphone cable to transceiver connector), or impedance mismatch. Original equipment ceramic microphone replacements usually require high-impedance audio connection. However, for some ceramic microphone inputs, replacement microphone audio connection must be low impedance.	Weak batteries, dirty battery contacts, microphone volume control set too low, or poor or loose connections (check especially microphone cable to transceiver connector).
Overmodulation (indicated on modulation level meter or by unintelligible speech)	Low-impedance microphone output too high for transceiver input. To correct, 470 ohm to 4.7 kilohm resistor may be added in series with transceiver audio input.	Microphone volume control set too high.
Low receiver volume		With 526T only, WHITE lead from amplifier to press-to-talk switch has not been cut (see Note 2 and Figure 4).
Immediate transmission when microphone is connected	With Grounded Switching, reversed connection of RED and BLACK leads (see Figure 2 and data sheet).	With Grounded Switching, reversed connection of RED and BLACK leads (see Figure 4 and data sheet).
No output	Poor or loose connections (check especially microphone cable to transceiver connector), or broken wires	Dead battery, dirty battery contacts, poor or loose connections (check especially microphone cable to transceiver connector), or broken wires.
Poor voice quality with low volume and/or bassy sound	High-impedance (GREEN) cable lead connected to audio input circuit. Change to low-impedance (WHITE) cable lead.	
No carrier while transmitting	BLACK lead has not been moved for isolated switching (see Note 5 and Figure 3).	With 526T only, Normal/VOX switch is in VOX position.

TROUBLESHOOTING (Continued)

SYMPTOM	PROBABLE CAUSE	
	With nonamplified microphone CB41, CB42, CB43, CB44, CB45	With amplified microphone 526T, 526T Series II
No audio while transmitting	Unused GREEN or WHITE audio lead has not been insulated	With 526T only, WHITE audio lead has been cut instead of WHITE lead from amplifier to press-to-talk switch (see Note 2 and Figure 4).
Transceiver fuse blows	Microphone not wired properly. Isolated switching may be required. Jumper lead between switch terminals has not been cut (see Note 5 and Figure 3).	Microphone not wired properly. Isolated switching may be required. With 526T only, BLUE lead has not been cut (see Note 3 and Figure 4).
Squeal while receiving (may vary with microphone-to-transceiver distance)	With hand-held models: Open case (see Isolated Switching section of data sheet). If WHITE cable lead connected to transceiver, cut GREEN lead at cartridge; if GREEN cable lead connected at transceiver, cut WHITE lead at cartridge. With Model CB41: Unscrew screen and grille, remove cartridge and fiber washer. If WHITE cable lead connected to transceiver, cut BLACK lead at cartridge. If GREEN cable lead connected to transceiver, cut RED lead at cartridge.	With 526T only, WHITE lead from amplifier to press-to-talk switch has not been cut (see Note 2 and Figure 4). With 526T Series II only, transceiver may require grounded audio input. See Special Switching section of data sheet.
Squeal while transmitting		With 526T only, GRAY lead not cut (see Note 1 and Figure 4).

PIN NUMBERING FOR TYPICAL CB CONNECTORS

(viewed from solder terminal side of plug)

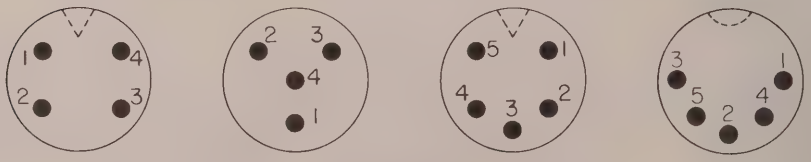
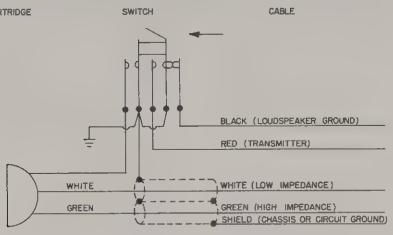
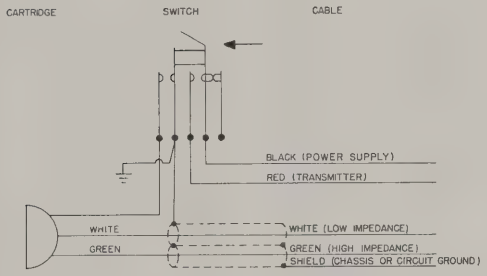


FIGURE 1

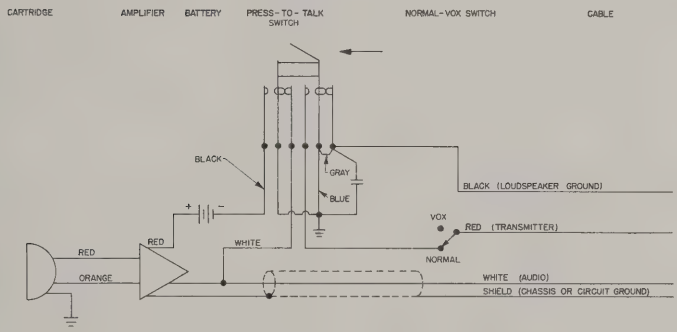
TYPICAL MICROPHONE CIRCUITS



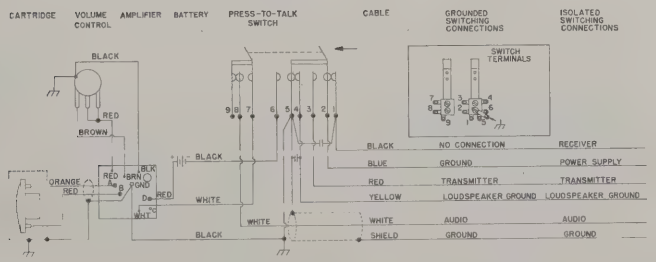
GROUNDED SWITCHING
FIGURE 2



ISOLATED SWITCHING
FIGURE 3



AMPLIFIED MICROPHONE - 526T
FIGURE 4



AMPLIFIED MICROPHONE - 526T SERIES II
FIGURE 5

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
AIRCASTLE							
2302, JE321	#3	#4	#1	#2	#4	NC	1, 2, 4
AIMOR							
CB-7000	#1	#4	#3	#2	#4	NC	1, 2
AIRLINE							
GAS-587							8
GEN-774A	#1	#2	#3	#4	#2	NC	2
ALARON							
B1025	#1	#4	#3	#2	#4	NC	
B1050	#3	#4	#1	#2	#4	NC	1, 2
B1150	#1	#2	#5	#3	#2	NC	1, 2
B1100	#1	#2	NC	#3	#2	NC	2, 4
ALLIED							
A2507	AUDIO-BLK	GND-SHLD	LS	RELAY-RED	GND-SHLD	NC	1
A2530	#1	#2	#2	#3	#2	NC	1, 2
A2533	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1, 2
A2559, A2561	AUDIO-WHT	GND-SHLD	NC	RELAY-RED	GND-SHLD	NC	
A2564, A2568	#4	#3	NC	#2	#3	NC	
A2569	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1
A2567	#1	#2	NC	#3	#2	NC	4
ALLSTATE							
893.62910, 11, 21, 31, 41	AUDIO	CHAS GND	LS GND	XMTR CKT	CHAS GND	NC	1, 2, 4

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
AMERICAN ELECTRONICS							
76-501 (Spirit), 76-601 (Freedom)	#4	#3	#2	#1	#3	NC	1, 2
76-551 (Buccaneer)							8
AMPHENOL							
777	#3	#1	NC	#2	#1	NC	
775	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	
600, 625, 650, 675							8
ARVIN							
20Y55-19	#2	#1	NC	#3	#1	NC	
20Y33-19	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	
AUDIOVOX							
MCB-1000	#1	#2	#5	#3	#2	NC	1, 2
MCB-500	#1	#6	#2	#5	#4	#3	6
MCB-2000	#1	#6	NC	#5	#4	#3	6, 7
AUTOMATIC							
MCE6510, TRE6500, MCR-6450, TRC-6448, TRR-6454/A	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	
CBU-2068	#1	#2	#3	#5	#2	NC	1, 2, 4
B&K/DYNASCAN							
Cobra 6	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1
Cobra 19, 21, 29, 21X, 85; Cam 89, 21XLR, 29XLR, 32XLR, 89XLR, 77X	#2	#1	#4	#3	#1	NC	1, 2
Cobra 20, 24	AUDIO	GND	NC	RELAY	GND	NC	
Cobra 23, 27, V	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	2, 4

ABBREVIATIONS

BLK = black
BLU = blue
BRN = brown
CHAS = chassis
CKT = circuit
CTR = center
GND = ground
GRN = green
HI = high
LO = low
LS = loudspeaker
MIC = microphone
NC = no connection
ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
B & K/DYNASCAN							
Cobra 25	#3	#1	NC	#2	#1	NC	
Cobra 28, 28A, 130, 131, 132, 132A, 135, 139, 880, 32XLR, 139XLR, 45XLR	#2	#1	NC	#3	#1	NC	2
Cobra 134, 138, 138A	TIP	SLEEVE	NC	RING	SLEEVE	NC	
Cam 88, Cobra 98	#1	#2	NC	#3	#2	NC	4
Cobra 138XLR	#2	#4	#1	#3	#4	NC	1, 2
BOHSEI							
Smokey	#1	#2	#3	#4	#2	NC	1, 2
BOMAN							
CB-950, CBH-990	#1	#2	#3	#4	#2	NC	1, 2
BROWNING							
Brownie, LTD, SST	#2	#1	#4	#3	#1	NC	
Mark II Series B, SSB15	#2	SHELL	NC	#1	SHELL	NC	4
Eaglette	AUDIO	CHAS GND	CKT GND	RELAY	CKT GND	NC	3, 4, 5, 7
Eaglette II	AUDIO	CB-PA SW	GND	XMTR	GND	NC	1, 2
SST-2, Brownie, Sabre, Baron	#2	#4	#1	#3	#4	NC	2
Eagle S23, Golden Eagle Mark II (69R & 69T), Golden Eagle Mark III	#1	SHELL	NC	#2	SHELL	NC	4
Golden Eagle Mark 4	#1	#3	NC	#2	#3	NC	4
CADRE							
525 (500-1, 520); 510-A; 515; 510	#2	#3	#4	#1	#3	NC	2
CALTRON							
CB-7500	#1	#2	#3	#4	#2	NC	

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
CITI-PHONE							
#19	#1	#2	NC	#4	#2	NC	
SS, CD-5A/6, CD-5A/12	RING	SLEEVE	NC	TIP	SLEEVE	NC	2, 4
CD 11/6, CD 11/12, 99/6, 99/12	WHT	CHAS GND	RED	BLK	CHAS GND	NC	1, 2, 4
CHANNEL MASTER							
CB6830	#2	#4	#1	#3	#4	NC	1, 2
CLARICON							
14-523	AUDIO	GND	NC	RELAY	GND	NC	2
30200	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1, 2
30400 (Pirate)	#2	#5	NC	#4	#5	NC	2
30500	#1	#2	#3	#4	#2	NC	1, 2
30600 (Privateer), 30800 (Activator)	#2	#1	#3	#4	#1	NC	1, 2
30850	#4	#1	#5	#3	#1	NC	1, 2
CLARION							
JC-201E	#1	#2	#3	#4	#2	NC	2
JC-202E							8
COMMANDO							
2320, 2325	#1	#4	#3	#2	#4	NC	
2310	#1	#2	#3	#4	#2	NC	1, 2
2340	WHT	SHLD	GRN	RED	BLK	BLU	6
COURIER							
Courier, TR-23S, Classic	#3	#4	NC	#1	#4	NC	
Citation, Classic II	#1	#3	NC	#2	#3	NC	
Classic III, Cruiser, Redball, Caravelle 40D, Conqueror 40D	#2	#4	#1	#3	#4	NC	1, 2
Caravelle, Caravelle II, Centurion, Conqueror, Conqueror II, Gladiator, Spartan SSB	TIP	SLEEVE	NC	RING	SLEEVE	NC	

ABBREVIATIONS

BLK = black
BLU = blue
BRN = brown
CHAS = chassis
CKT = circuit
CTR = center
GND = ground
GRN = green
HI = high
LO = low
LS = loudspeaker
MIC = microphone
NC = no connection
ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
COURIER							
Courier 23; 23+; Fleet Courier, 30B; Royale	#3	#4	NC	#2	#4	NC	4
CFT-800A, Courier TR-5, Traveller, ML-100	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1
Cadet 23	AUDIO	CKT GND	NC	RELAY	CKT GND	NC	
Comet 23	#2	#1	#3	#4	#1	NC	1, 2
Chief 23	#4	#3	#2	#1	#3	NC	1, 2
Ranger 23	#3	#4	#1	#2	#4	NC	1, 4
Traveller II	#4	#1	#3	#2	#1	NC	1
CRAIG							
4101, 4102, 4103, 4104, 4201	#2	#3	#4	#5	#3	NC	1, 2
DEMCO							
Satelite Deluxe	#4 (Hi/Lo Mic Switch to Hi)	#1	#2	#3	#1	NC	1, 2, 4
Ravelle 23	AUDIO	CHAS GND	LS GND	XMTR CKT	CHAS GND	NC	1, 4
Satelite T110A, Travelier (Series B)	#2	#1	NC	#3	#1	NC	4
Ravelle	RING	SLEEVE	NC	TIP	SLEEVE	NC	4
ECHO							
49er	#1	#2	#4	#3	#2	NC	1, 2
EICO							
7923 (Nova 23), 712, 771W, 772W	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	4
779, 779A, 777	#2	SHELL	NC	#1	SHELL	NC	4
7723	#1	#2	#3	#4	#2	NC	1, 2

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
ELECTRONIC 2000							
CB-23CH	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	2
FANON							
Fanfare 100, Rebel 23+	YEL	SHLD	BLU	RED	SHLD	NC	1, 2
Fanfare 700	#1	#2	#5	#3	#2	NC	1, 2
SFT-400, SFT-500	#5	#3	#2	#1	#3	NC	1, 2
SFT-600	#2	#1	NC	#3	#1	NC	
SFT-700, SFT-900 (Guardsman)	#2	#1	#3	#4	#1	NC	1, 2
SFT-800A	AUDIO	GND	LS CKT	+6.2V PWR SPLY	GND	NC	1
Fanfare 880	TIP	SLEEVE	NC	RING	SLEEVE	NC	
Fanfare 120	AUDIO-YEL	GND-SHLD	LS-BLK	+5V-WHT	GND-SHLD	NC	1, 2
T-700							8
Rebel 40A, Fanfare 100F1	WHT	SHLD	BLK	RED	SHLD	NC	1, 2
FIELDMASTER							
MF-1001	#3	#2	NC	#1	#2	NC	2
TR-18A, TR-18M	#1	#3	NC	#2	#3	NC	1, 2
Micro Mini 3	#1	#6	#2	#5	#4	#3	6
Micro Mini 6	#1	#6	#2	#3	#4	#5	6
FULCOMM/ STEREOSONIC							
2300, 01, 02, 03	#1	#2	#3	#4	#2	NC	1, 2
GEMTRONICS							
GTX-23, GTX-36	#1	#2	#3	#4	#2	NC	1
GTX-2325	#1	#4	NC	#2	#4	NC	2
GTX-2300	#1	#3	NC	#2	#3	NC	1, 2
GTX-3000	#1	#3	#5	#2	#3	NC	1, 2
GT-230	#1	#2	#4	#3	#2	NC	1, 2

ABBREVIATIONS

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HI = high
LO = low
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RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
GENERAL ELECTRIC							
3-5810, A; 3-5800A, 3-5801A	#4	#1	#5	#3	#1	NC	1
3-5815, 3-5825, 3-5821A, 3-5812A	#1	#2	#3	#4	#2	NC	1, 2
3-5975A							8
GENERAL RADIO AND TELEPHONE							
Super MC-11/A	#1	#3	NC	#2	#3	NC	4
Super MC-9	#4	#3	NC	#2	#3	NC	2, 4
Super MC-8	#4	#3	#1	#2	#1	NC	3, 5, 7
MC-6	#4	#3	#1	#2	#3	NC	1, 2
VS-6, VS-7	WHT	BLK/BLU	RED	GRN	BLK/BLU	NC	
GLOBE							
65-228 (President VIII)	RING	SLEEVE	NC	TIP	SLEEVE	NC	2, 4
Globe Master 65-220	AUDIO	SHELL	NC	XMTR CKT	SHELL	NC	4
9000, 9001	#1	#4	#3	#2	#4	NC	1, 2
GM							
23B, CBD-10, 23C	#1	#2	#3	#4	#2	NC	1, 2
130	AUDIO-BLK	GND	GND	RELAY-GRN	GND	NC	2
123A	WHT	SHLD	YEL	BLU	RED	BLK	6
CBD-12	WHT	SHLD	YEL	BLU	BLK	RED	6
GONSET							
G-15 (3428/3429)	AUDIO	CHAS GND	NC	XMTR CKT	CHAS GND	NC	2, 4
GRANADA							
CB6, CB7, FCB27	#2	#1	#3	#4	#1	NC	1, 2
GRAND PRIX							
D-1325RF	#1	#2	#3	#4	#2	NC	1, 2

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
HALLICRAFTERS							
CB-24	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	
CB-21	RED	SHLD	BLK	WHT	BLK	NC	3, 5, 7
CB-19, CB-17	WHT	CHAS GND	BLK	RED	CHAS GND	NC	1, 4
CB-7, CB-9	AUDIO	CHAS GND	LS GND	XMTR CKT	CHAS GND	NC	1, 4
CB-10	WHT	CKT GND	BLK	RED	BLK	NC	2, 3, 4, 5, 7
CB-12	AUDIO	CKT GND	XMTR CKT	−12.6V PWR SPLY	XMTR CKT	NC	2, 3, 5, 7
P-5-120, CB-5, CB-14, HA-14, CB-5 Mark II	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	2, 4
CB-20	WHT	SHLD	NC	RED	BLU	BLK	6
HALLMARK							
512	#2	#3	NC	#1	#3	NC	2, 4
1250B	#2	SHELL	#1	#3	SHELL	NC	1, 4
HAMMARLUND							
CB-Six (CB-6)	AUDIO	CHAS GND	LS GND	XMTR CKT	CHAS GND	NC	1, 4
HANDIC							
2305	#2	#1	#4	#3	#1	NC	4
235, 305, 605							8
HEATHKIT							
GW-14A, GWW-14A, GWW-14AS, GW-14, GWA-14-1, GWW-14	AUDIO	CKT GND	XMTR CKT	12V PWR SPLY	XMTR CKT	NC	2, 3, 5, 7
MW-34, MWW-34	AUDIO	CHAS GND	NC	XMTR CKT	CHAS GND	NC	2, 4
GW-32A/D, GWW-32A/D, GW-12A/D, GWW-12A/D	WHT	CHAS GND	RED	BLK	CHAS GND	NC	1, 2, 4
GW-42, GWW-42	#2	#1	#3	#4	#1	NC	1, 2, 4
GW-11A/D, GWW-11A/D, GW-22A/D, GWW-22A/D	AUDIO	CHAS GND	LS GND	XMTR CKT	CHAS GND	NC	1, 2, 4
HITACHI							
CM-4800H, CM-2375H, CM-2425H, CM-2400C, H	#4	#1	#5	#3	#1	NC	1, 2

ABBREVIATIONS

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GRN = green
HI = high
LO = low
LS = loudspeaker
MIC = microphone
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ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
HY-GAIN							
623 (23 Plus)	#1	#4	NC	#2	#4	NC	
672 (Hy Range III), 673 (Hy Range IV), 674 (Hy Range V)	#1	#2	NC	#3	#2	NC	2
670 (Hy Range I), 670A, 671 (Hy Range II), 671A	#1	#4	NC	#2	#3	#5	6
674B (Hy Range V), 673B (Hy Range IV), 672B (Hy Range III), 681 (Hy Range I, IA), 682 (Hy Range II, IIA), 670B, B-PR, 671B, 2681, 2683, 3077, VIII	#1	#3	#5	#2	#3	NC	1, 2
2679							8
ITT							
CB4000M	#2	#1	#4	#3	#1	NC	1, 2
RAY JEFFERSON							
CB-705	#1	#2	#4	#3	#2	NC	1, 2
CB-707	RED	SHLD	WHT	YEL	BLK	BLU	6
CB-711	YEL	SHLD	VIO	RED	SHIELD	NC	1, 2
CB-905	RING	SLEEVE	NC	TIP	SLEEVE	NC	4
CB-701	#1	#2	#3	#4	#2	NC	1, 2, 4
JET SOUNDS							
CB-7000	#1	#4	NC	#2	#4	NC	
E. F. JOHNSON							
351, Messenger III Revised	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	2
Messenger 123C, D, E, F, G (Rev); 110; 100	AUDIO	CKT GND	LS GND	XMTR CKT	CKT GND	NC	1, 2
Messenger II (242-162/-163)	AUDIO	CKT GND	LS GND	XMTR CKT	CKT GND	NC	1, 2, 4
Messenger 323, 323M, 320, 300, III	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	2
Messenger 124, 124M, 223	#1	#4	#2	#3	#4	NC	1, 4
Messenger 120	WHT	SHLD	BLK	BLU	RED	YEL	6
Messenger 120A, 121, 130A, 350							8
Messenger 122, 191, 123A, 323A, 4120, 4140, 4145, 4230	WHT	SHLD	YEL	BLU	RED	BLK	6
Messenger 123B, 123SJ	WHT	SHLD	YEL	BLU	ORN	BLK	6
Messenger 125	AUDIO	11.8V Pwr Sply	LS	XMTR	11.8V Pwr Sply	RCVR	6

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
E. F. JOHNSON							
Messenger 250	#1	CKT GND	#4	#5	#2	#3	6
4170, 4175	#1	#6	#4	#5	#2	#3	6
Viking 352, 352D, 4740	#1	#5	NC	#2	#5	NC	2
J. I. L.							
852CB	#1	#3	NC	#5	#3	NC	2
606CB	#1	#2	#5	#3	#2	NC	1, 2
KAAR							
TR336 (SkyLark I), TR337 (Skyhawk II)	WHT	CKT GND	NC	BLK	CKT GND	NC	2
6/117TR333/B, 12/117TR333/B, 32/TR333B	RING	SLEEVE	NC	TIP	SLEEVE	NC	2, 4
TR327/A/B							8
TR335 (Skyhawk)	WHT	CKT GND	NC	BLK	CKT GND	NC	2, 4
KENWOOD							
TS-520, TS-820	#1	#4	#2	#3	#4	NC	3, 4, 5
KNIGHT							
KN-2500, KN-2550, KN-2580, KN-2585	#3	#4	#5	#1	#4	NC	1, 4
KN-2526, KN-2565, KN-2567	#1	#2	NC	#3	#2	NC	4
KN-2560	#1	#4	NC	#2	#4	NC	4
KN-2590	AUDIO-WHT	GND-SHLD	LS CKT-BLK	XMTR CKT-RED	GND-SHLD	NC	1, 4
KRACO							
KCB-2320A, KCB-2310A, KCB-2330B	#1	#2	#3	#4	#2	NC	1, 2
KCB-2370	#5	#3	NC	#1	#3	NC	2
KCB-1401	#1	#4	NC	#3	#4	NC	
KB-2355	#1	#2	#3	#4	#2	NC	
KCB-1300	YEL	SHLD	BLK	WHT	SHLD	NC	1, 2
KCB-2390	YEL	SHLD	VIO	RED	SHLD	NC	1, 2
KRIS							
T23B, 99er, Vega	AUDIO	GND	NC	RELAY	GND	NC	
23+	#1	#4	NC	#2	#4	NC	4
Valiant, Ventura	#1	#2	#4	#3	#2	NC	1
Victor, Victor II	#1	#2	#4	#3	#2	NC	1, 4
XL23, XL25, XL30, XL50	#1	#2	#4	#3	#2	NC	2
XL70	#1	#4	#3	#2	#4	NC	

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LS = loudspeaker
MIC = microphone
NC = no connection
ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
LAFAYETTE							
Comstat 19, 23, 23 Mark V, 35; HB-400; HB-444; HB-444/25A	#1	#4	#3	#2	#4	NC	1, 4
Comstat 23, 25A, 25B	#1	#4	NC	#2	#4	NC	4
Comstat 23 Mark VI	#1	GND	#3	#2	GND	NC	4
HB-23, HB-502, HB-502A, Micro 12, Telsat SSB-25	#2	#4	#3	#1	#4	NC	1
HB-625, HB-625A, HB-823A	#3	#2	#1	#4	#2	NC	1
HB-333, HE-90	#3	#4	#5	#1	#4	NC	1, 4
HA-100, HB-111, HB-222, HE-20AWX, HE-20B, HE-20C	#3	#2	NC	#1	#2	NC	4
Com-Phone Mark II	#1	#3, #4	NC	#2	#3, #4	NC	1, 2
SSB-75, Telsat SSB-100, Telsat 1140, HB640, HB650, HB740, HB750, HB940, HB950, Micro 223A	#1	#4	#5	#2	#4	NC	1, 2
HB-115A	#3	#4	#1	#5	#4	NC	4
HB-200	#3	#4	#2	#1	#4	NC	1, 4
HA-450, HE-20T	#2	#3	#4	#1	#3	NC	1
HE-20TA, Micro 923	AUDIO	GND	NC	RELAY	GND	NC	
HB-501, HB-555, HB-555 (Rev)	#4	#3	#1	#2	#3	NC	1
HB-500/-501; HB-600; Micro 23; Telsat SSB-25A; SSB-50, SSB-50A, 50, 150, 924, 925	CTR	GND	NC	RELAY	GND	NC	1
HB-525A/B; HB-525C, D, E, F; Telsat 23	#4	#3	#2	#1	#3	NC	1
Micro 66	#1	#2	#4	#3	#2	NC	1
HE-15B	#3	#1	NC	NC	#1	NC	2, 4
HB-550	#4	#1	NC	#2	#3	#5	6, 7
Micro-723, Telsat 1023, 1000; HB-700	#1	#4	NC	#2	#3	#5	6, 7
Com-Phone 23A	RED	SHLD	BLU	BLK	SHLD	NC	1, 2

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
LASALLE							
LA-101-AN	#1	#2	#4	#3	#2	NC	1, 2, 4
MARK PRODUCTS							
Invader 23	RING	SLEEVE	NC	TIP	SLEEVE	NC	2
Lancer 23	AUDIO	CHAS GND	NC	XMTR CKT	CHAS GND	NC	2
METROTEK							
Charger, Bronco							8
Colt 23	RING	SLEEVE	NC	TIP	SLEEVE	NC	4
Pacer, Pacer II, Mustang	WHT	CHAS GND	BLACK	RED	CHAS GND	NC	1, 4
MIDLAND							
13-863, 13-887, 13-898, 13-898B	#1	#2	NC	#3	#2	NC	2
13-870C, 13-870D, 13-871, 13-872, 13-873	RING	SLEEVE	NC	TIP	SLEEVE	NC	
13-881, 13-890	AUDIO	GND	NC	XMTR	GND	NC	
13-881B, 13-893, 13-895	#1	#2	NC	#4	#2	NC	
13-800	RED	CKT GND	BLU	WHITE	BLU	NC	3, 5, 7
13-150	AUDIO	CHAS GND	CKT GND	XMTR	CKT GND	NC	2, 3, 5, 7
13-160, 13-856	AUDIO	GND	LS	XMTR	GND	NC	1, 4
13-801, 13-854	RED	CKT GND	BLACK	WHITE	CKT GND	NC	1, 2
13-844, 13-879, 13-883, 13-864, 13-883B	#1	#2	#4	#3	#2	NC	1
13-888B	#2	#5	#4	#3	#5	NC	1, 2
13-845, 13-868, 13-874, 13-876, 13-878, 13-877, 13-880B, 13-880, 13-885, 13-891	TIP	SLEEVE	NC	RING	SLEEVE	NC	
77-888	#1	#5	#4	#3	#5	NC	1, 2
13-869	#4	#3	#1	#2	#3	NC	1

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RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
MIDLAND							
13-862, 13-862B, 13-879B, 13-866, 13-867, 13-857, 13-882B, 13-892, 13-852, 13-884, 13-882B, C, 13-858, 13-857B, 13-863B, 77-857, 13-853, 13-830, 77-882	#1	#2	#3	#4	#2	NC	1, 2
13-882	#1	#4	NC	#2	#3	#5	6, 7
13-896	#1	#2	NC	#3	#4	#5	6, 7
13-995	#1	#2	#6	#3	#6	NC	3, 5, 7
13-886	#5	#1	#2	#3	#1	NC	1, 2
13-866, 13-861, 77-955							8
MORSE/ELECTRO-PHONIC							
CB700, CB800, 3005	#1	#2	#3	#4	#2	NC	1, 2
CB2000	#1	#2	#4	#3	#2	NC	1, 2
2001	#1	#2	NC	#3	#2	NC	
MOTOROLA							
CB40	#4	#3	#2	#1	#3	NC	1, 2
NUVOX							
CB-7000	#1	#3	#4	#2	#3	NC	
TC-5020	#1	#6	#2	#5	#4	#3	6
OLSON							
CB-88, RA-717	AUDIO	CKT GND	LS GND	XMTR	CKT GND	NC	1, 2
RA-590 (Side Bander II)	#1	#4	NC	#3	#4	NC	2, 4
CB-23, RA-530	RING	SLEEVE	NC	TIP	SLEEVE	NC	2, 4
RA-590	AUDIO	CHAS GND	NC	XMTR	CHAS GND	NC	2, 4
CB-409	#1	#2	#5	#3	#2	NC	1, 2
PACE							
TA2300/B	#1	#2	#3	#4	#2	NC	1
2300 (Early Model)	AUDIO	CHAS GND	NC	XMTR CKT	CHAS GND	NC	2
2300 (After 5/72 with 5 pin plug), P2376, 2376A	#5	#4	#3	#2	#4	NC	1, 4
2300 (New model with 4 pin plug)	#4	#3	#2	#1	#3	NC	1, 2, 4
I, II, II-S, 100, 200, Plus 23	AUDIO	GND	GND	XMTR CKT	GND	NC	2, 4

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
PACE							
CBST-23 (Side Talk 23), 130, Side Talk 1000B, 1000M, CB113, CB145, CB166, CB162, CB161	#1	#2	NC	#4	#2	NC	2
CB-76	#4	#3	#2	#1	#3	NC	1, 4
100ASA	#4	#1	NC	#2	#1	NC	2
100S	#4	#2	NC	#1	#2	NC	
102, 123, 123A	AUDIO	CKT GND	NC	RELAY	CKT GND	NC	2
C123A, 123A (latest production)	#4	#2	NC	#1	#2	NC	2
223, 2376	AUDIO	CHAS GND	NC	RELAY	CHAS GND	NC	1, 2
CB1023, CB1023B	TIP	SLEEVE	NC	RING	SLEEVE	NC	
5000	#8	#6	#7	#9	#6	NC	
133, CB143, 100ASA-1	#4	#2	NC	#1	#2[1]	NC	2
2376B	CLEAR	BRAID	BLK	RED	BRAID	NC	2
CB144	#1	#4	NC	#2	#4	NC	2
8010A, 8015A	#4	#3	NC	#1	#3	NC	1, 2
PAL							
Roadrunner 23	#4	#1	NC	#2	#1	NC	1, 2
PALOMAR							
71B, 73	RING	SLEEVE	NC	TIP	SLEEVE	NC	2, 4
Digicom 100	#1	#3	NC	#2	#3	NC	4
PANASONIC							
CR-B1717EU, CR-B4747EU	#1	#3	#5	#2	#3	NC	2
RJ-3200	#2	#4	#1	#3	#4	NC	1, 2
RJ-3100	#1	#2	#4	#3	#2	NC	1, 2
CR-B4737EU	#1	#3	NC	#2	#3	NC	1, 2

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SHLD = shield
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VIO = violet
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Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
PEARCE-SIMPSON							
Bobcat 23	#1	#3	NC	#5	#3	NC	2, 4
Bobcat 23B, Sentry	AUDIO	GND	GND	RELAY	GND	NC	2
Bobcat 23C, Puma 23B	#4	#2	#3	#1	#2	NC	1, 2
Cheetah SSB; Cougar 23 (latest production); Bearcat 23, 23/B; Tiger 23; Panther SSB; Bengal SSB; Tomcat	#1	#2	NC	#3	#2	NC	
Director, Director (Rev), Escort, Escort II	AUDIO-WHT	GND-SHLD	NC	RELAY-RED	GND-SHLD	NC	4
Guardian 23, 23B	#1	SHELL	NC	#2	SHELL	NC	4
Bearcat 23C; Cougar 23B; GM 23; Lynx 23; Puma 23; Super Lynx; Tiger 23B, 23C; Simba SSB (latest production), Puma 23C, Bobcat 23E, Tiger Mark 2	#1	#2	#3	#4	#2	NC	1, 2
Panther	AUDIO	GND	LS	XMTR	11.4V Pwr Sply	RCVR	6
Alleycat 23, Tomcat 23, 23B; 2301	AUDIO	CKT GND	LS CKT	XMTR CKT	CKT GND	NC	1, 2
2302, Pussycat 23	#2	#1	#3	#4	#1	NC	1
Wildcat, Wildcat II							8
Bobcat 23D	#2	#4	#3	#1	#4	NC	1, 2
J. C. PENNEY							
985-6050 (Pinto 23)	#3	#1	NC	#2	#1	NC	2
981-6051 (Golden Pinto), 985-6060 (Pinto 23)	#2	#1	NC	#3	#1	NC	
981-6075 (Pinto SSB)	AUDIO	GND	NC	RELAY	GND	NC	
981-6200, 981-6201	AUDIO-WHT	GND-SHLD	LS CKT-RED	XMTR CKT-GRN	GND-SHLD	NC	1
981-6210 (Pinto), 981-6230 (Pinto)	#1	#2	#3	#4	#2	NC	1
981-6212 (Pinto), 981-6220, 981-6235 (Pinto), 981-6240, 981-6213, 981-6235	#2	#1	#4	#3	#1	NC	1, 2

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
POLY-COMM							
Pro	#1	#2	#4	#3	#2	NC	1, 2, 4
Senior 23	#1	#2	NC	#3	#2	NC	2, 4
PRESIDENT							
Washington	#2	#1	NC	#3	#1	NC	
John Q, Teddy R, Honest Abe, Dwight D, Zachary T, Grant	#2	#1	#4	#3	#1	NC	1, 2
RADIOCOM							
27C-2A,-2B,-2C	#2	#1	NC	#4	#1	NC	2, 4
RCA							
Mark VIII, Mark Nine	WHT	CHAS GND	RED	BLK	CHAS GND	NC	1, 2, 4
Mark 10	AUDIO	CHAS GND	NC	XMTR CKT	CHAS GND	NC	2, 4
14T 100/200, Co-Pilots, 14T 270	#1	#2	#3	#4	#2	NC	1, 2
14T 400	#1	#3	NC	#2	#3	NC	1, 2
14T 410	#1	#3	#5	#2	#3	NC	
RAYTHEON							
Raycom							8
Raycom IV	#2	#4	NC	#3	#4	NC	2
REALISTIC							
TRC-5	AUDIO-WHT	GND-SHLD	LS CKT-RED	XMTR CKT-BLK	GND-SHLD	NC	1, 4
TRC-8D	#3	#4	#2	#1	#4	NC	1, 4
TRC-10A	#3	#4	#2	#1	#4	NC	1, 2
TRC-18	#2	#1	#3	#4	#1	NC	3, 5
Americana 23+	#2	SHELL	NC	#1	SHELL	NC	4
Mini 23B	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1
TRC-23B	AUDIO	GND	NC	RELAY	GND	NC	
TRC-X23A	#2	#1	NC	#3	#1	NC	4
TRC-23C,-24A,-55, -56,-52,-68	#4	#1	#5	#3	#1	NC	1, 2

ABBREVIATIONS

BLK = black
BLU = blue
BRN = brown
CHAS = chassis
CKT = circuit
CTR = center
GND = ground
GRN = green
HI = high
LO = low
LS = loudspeaker
MIC = microphone
NC = no connection
ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
REALISTIC							
TRC-24	#1	#3	NC	#5	#3	NC	1, 2
TRC-24B,-30,-30A, -50	#4	#1	#5	#3	#1	NC	1
TRC-24C,-46,-47, -57,-48	#4	#1	NC	#3	#1	NC	1, 2
TRC-29	#1	#3	#5	#4	#5	NC	3, 5, 7
TRC-40 (Navajo Pro)	#1	#3	NC	#5	#3	NC	
TRC-49 (Navajo Pro Niner)	#2	#1	NC	#5	#1	NC	
TRC-50B (4 pin)	#4	#2	#1	#3	#2	NC	1
TRC-14,-15	WHT	SHLD	NC	NC	BLK	RED	6
TRC-9,-9A,-11							6, 9
TRC-27A	AUDIO	GND	BLU	YEL	GND	RED	6
TRC-200	#4	#5	#2	#1	#5	NC	7
TRC-61, TRC-180							8
REALTONE							
TR-6436	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	
REGENCY							
Ranger CB-270, Range Gain	AUDIO	GND	NC	RELAY	GND	NC	4
Formula/23, Sprint/23	#1	#2	#3	#4	#3	NC	3, 5, 7
CB-27, CBM-27-6, CBM-27-12	AUDIO-WHT	GND-SHLD	NC	RELAY-RED	GND-SHLD	NC	4
CR-123	TIP	SLEEVE	NC	RING	SLEEVE	NC	
CR-123B	#1	#2	NC	#3	#2	NC	
CR-142, CR-185, CR-230, CR-240	#1	#2	#3	#4	#2	NC	1, 2
CR-186	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1
Imperial (CB-253), Imperial II (CB-254), Range Gain II, Romper (A-3)	#1	#4	NC	#3	#4	NC	4
Sprint/23 II	#1	#2	#4	#3	#2	NC	1
500, GT-523							8
CR-202	AUDIO-YEL	GND-SHLD	LS-VIO	XMTR-RED	GND-SHLD	NC	1, 2
CB-501, CB-701	#4	#2	#5	#3	#2	NC	1, 2

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
ROBYN							
XL-Two	#4	#3	#1	#2	#1	NC	2, 3, 5, 7
LB-23, WV-23, DG-30, LB-23A, WV-23A	#1	#2	#4	#3	#2	NC	1, 2
BB-123, TR-123C	#1	#2	NC	#4	#2	NC	1, 2
J-123	AUDIO	GND	NC	RELAY	GND	NC	
K-123	#1	#2	#3	#4	#3	NC	2, 3, 5, 7
T-123	AUDIO	GND	NC	RELAY	GND	NC	4
T-123B	#1	#3	NC	#2	#3	NC	4
TR-123B	#2	#1	NC	#3	#1	NC	2
605	#3	#2	#5	#1	#2	NC	1
SS-747B	#1	#4	NC	#2	#4	NC	
XL-One, SX-101, GT-VII	#1	#2	#3	#4	#3	NC	2, 3, 5, 7
ROSS/ELECTRO-PHONIC							
CB-1000	#1	#2	#4	#3	#2	NC	1, 2
ROYCE							
1-600	AUDIO	GND	LS CKT	XMTR CKT	GND	NC	1
1-600A, 1-640, 1-601, 1-606, 1-600B, 1-605A, 1-620, 1-602A, 1-603, 1-612, 1-650, 1-624, 1-653B	#1	#2	#4	#3	#2	NC	1, 2
1-614	#5	#3	NC	#1	#3	NC	2
1-630	#1	#2	#4	#5	#2	NC	1, 2
1-631, 1-650A, 1-658, 1-601, 1-700, 1-655	#1	#2	NC	#3	#2	NC	2
1-590A	WHT	SHLD	BLK	RED	SHLD	NC	1, 2
1-682	#1	#4	NC	#3	#4	NC	1, 2
ROMAR							
CB-7000	#1	#4	#3	#2	#4	NC	
ACT-1914	#1	#2	#3	#4	#2	NC	1, 2
RYSTL							
CB-523	#1	#2	#2	#3	#2	NC	2
CBR-1700, CBR-1800	#1	#2	#3	#4	#2	NC	1
CBR-2100	#2	#1	#4	#3	#1	NC	1

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GRN = green
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ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
SBE							
1CB (Coronado)	AUDIO	GND	NC	RELAY	GND	NC	
10CB (Coronado II), 11CB (Trinidad), 12CB (Sidebander II)	#2	#3	NC	#4	#3	NC	2
6CB	#2	#3	NC	#1	#3	NC	
7CB (Sierra)	#1	#2	#3	#4	#3	NC	3, 5, 7
8CB (Console), 16CB (Console II)	#2	#1	NC	#3	#1	NC	
9CB (Catalina)	AUDIO	GND	+12V	RELAY	+12V	NC	3, 5, 7
14CB (Super Console)	#2	#4	NC	#3	#4	NC	
21CB (Cortez), 18CB (Sidebander III), 26CB (Formula D), 29CB (Catalina/ Malibu)	#2	#1	#3	#4	#3	NC	3, 5, 7
22CB (Catalina II)	AUDIO	CKT GND	LS CKT	XMTR CKT	CKT GND	NC	1, 2
23CB (Capri II)	WHT	SHLD	BLU	BLK	RED	BRN	6
32CB, 34CB (Brute)	WHT	SHLD	NC	RED	BRN	GRN	6
26CB, 30CB	#2	#1	#4	#3	#4	NC	1, 2, 3, 5, 7
31CB (Shasta I), 24CB (Shasta III)							8
SEARS							
7535	#1	#4	#2	#3	#4	NC	1, 2, 4
6556	AUDIO	CKT GND	LS GND	XMTR CKT	CKT GND	NC	1
6562, 6563, 6558	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	
6550, 7531	AUDIO	CHAS GND	LS GND	XMTR CKT	CHAS GND	NC	1, 4
6554	#1	#2	NC	#4	#2	NC	2
6552, 6553	WHT	CKT GND	BLK	RED	BLK	NC	2, 3, 4, 5, 7
934-36710500, 934-36770500, 934-36740500	#4	#1	#5	#3	#1	NC	1, 2
3677	#2	#1	NC	#5	#1	NC	2
934-36772600	AUDIO	CKT GND	NC	XMTR CKT	CKT GND	NC	4
SHAKESPEARE							
GBS1500, GBS2500	#1	#2	#3	#4	#2	NC	1, 2
GBS2000	#1	#2	#4	#3	#2	NC	1, 2

NOTES

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2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
8. This transceiver is not recommended for use with Shure Citizens Band microphones.
9. This transceiver is recommended for use only with the 526T Series II after special internal modifications are made. Refer to the data sheet, or write to Shure Brothers Inc.

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
SHARP							
CBT-58	AUDIO	CHAS GND	NC	XMTR CKT	CHAS GND	NC	2
CB-500UB	AUDIO-YEL	GND	NC	XMTR-VIO	GND	NC	2
CB-700	#1	#4	#3	#2	#4	NC	
CB-750A, CB-800A	#1	#3	NC	#2	#3	NC	1, 2
SILTRONIX							
SSB-23	#1	#4	NC	#2	#4	NC	2
SSB-23A	#1	#2	#4	#3	#2	NC	1, 2
1011B, C, D	RING	SLEEVE	NC	TIP	SLEEVE	NC	2
AM-1, AM-2 (Apache/Mohawk)	#1	#2	NC	#4	#2	NC	
SONAR							
FS-23, FM-40, E, E (Rev), G, H, FS-3023	RING	SLEEVE	NC	TIP	SLEEVE	NC	2, 4
J-23	AUDIO	CHAS GND	CKT GND	XMTR CKT	CKT GND	NC	2, 3, 5, 7
SPARKOMATIC							
CB-2123	#1	#4	NC	#3	#5	#2	6
SQUIRES-SANDERS							
Skipper	AUDIO	CHAS GND	LS GND	CB SW	CHAS GND	NC	1, 2, 4
Admiral, 23'er, S5S	RING	SLEEVE	NC	TIP	SLEEVE	NC	4
STANDARD COMMUNICATIONS							
Horizon 29	#2	#4	#1	#3	#4	NC	1, 2
Horizon 29A	#2	#1	#4	#3	#1	NC	1, 2
STEREOSONIC							
2355, 2360	#1	#2	#3	#4	#2	NC	1, 2
SURVEYOR							
2600	#3	#4	#1	#2	#4	NC	1, 2
2400	#1	#2	#5	#3	#2	NC	1, 2
2100, 2300	#4	#2	NC	#1	#2	NC	2
1000							8

ABBREVIATIONS

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GND = ground
GRN = green
HI = high
LO = low
LS = loudspeaker
MIC = microphone
NC = no connection
ORN = orange
PWR SPLY = power supply
RCVR = receiver
Rev = revised
SHLD = shield
SW = switch
V = volt
VIO = violet
WHT = white
XMTR = transmitter
YEL = yellow
Z = impedance

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
TEABERRY							
Five X Five	#1	#2	NC	#3	#2	NC	2
Big "T"	#1	#2	#3	#4	#3	NC	2, 3, 5, 7
Model "T"	#1	#3	#4	#2	#4	NC	4
"T" Charlie One	#2	#3	#4	#1	#3	NC	1
Twin "T"	RING	SLEEVE	NC	TIP	SLEEVE	NC	
Stalker One, Two	#1	#2	NC	#4	#2	NC	2
"T" Scout	AUDIO-YEL	SHLD	VIOLET	RED	SHLD	NC	1, 2
Mighty "T"	#4	#1	#5	#3	#1	NC	1, 2
Mini "T", Mini "T" II							8
Tele "T"	#4	#1	#3	#5	#1	NC	1
"T" Control, Racer "T"	#2	#4	#1	#3	#4	NC	1, 2
Titan "T"	#1	#2	#3	#4	#2	NC	1
TRAM							
Corsair 464, TR27D/E, XL-100	RING	SLEEVE	NC	TIP	SLEEVE	NC	4
Titan; Titan II, IIA, III, IV, D201	#1	#2	NC	#4	#2	NC	4
Diamond 40, 60, 62, XL, XL5	#2	#1	NC	#3	#1	NC	
TRUETONE							
DC4530 (Late Production)	AUDIO-RED	SHLD	LS GND-BLK	XMTR CKT-WHT	SHLD	NC	1, 2
MCC4635A-67, DX4370	#1	#2	#4	#3	#2	NC	1, 2
MCC4434A-57	#1	#4	#3	#2	#4	NC	1, 2
MIC4731A-67	#4	#3	#2	#1	#3	NC	1, 2
MCC4774	#3	#1	#4	#2	#1	NC	
MCC4532A-57, MCC4370A-57, MCC4532A-47, MCC4760-67, MCC4770, MIC4434A-67, 4434B-67, MIC4739A-67, MIC4733A-67, CYJ4732A-77, DC4672	#1	#2	#3	#4	#2	NC	1, 2

NOTES

1. When using the 526T with this transceiver, cut the internal GRAY lead of the microphone.
2. When using the 526T with this transceiver, cut the internal WHITE lead of the microphone from the amplifier to the press-to-talk switch (see Figure 4).
3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
4. This transceiver requires a high-impedance audio input. When using the CB41, CB42, CB43, CB44, and CB45, the GREEN audio lead replaces the WHITE audio lead.
5. This transceiver requires an isolated switching contact when using the CB41, CB42, CB43, CB44, and CB45. Refer to the Isolated Switching section of the data sheet for circuit modification instructions (see Figure 3).
6. This transceiver is recommended for use only with the 526T Series II.
7. When using the 526T Series II with this transceiver, the YELLOW lead is not used.
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Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
TRUETONE							
MIC4821A-86	AUDIO	CHAS GND	NC	XMTR CKT	CHAS GND	NC	4
1250B, 512 Series B (DX4101)	#2	SHELL	#1	#3	SHELL	NC	1, 4
1250A	AUDIO	CHAS GND	LS GND	XMTR CKT	CHAS GND	NC	1, 2, 4
MIC4350-37	RED	SHLD	NC	WHT	BLU	BLK	6, 7
MIC4622A-67, MIC4512A-47, MIC4726A, MCC4724A-77, MCC4720A-77, CYJ4862A-87							8
UNIMETRICS							
Stingray II	#1	#3	#5	#2	#3	NC	1, 2
Dolphone	#1	#3	NC	#2	#3	NC	1, 2
Sea Horse I, Mako-I							8
UTAC							
TR18M	#1	#3	NC	#2	#3	NC	
Micro Mini 23, Super Tiny 23	#1	#6	#2	#5	#4	#3	6
Studio 4000	#1	#3	NC	#2	#3	NC	1, 2, 4
TRX-2000	#3	#2	#5	#1	#2	NC	1, 2, 4
TRX-400	#1	#3	#4	#2	#3	NC	1, 2
TRX-30	#1	#3	NC	#2	#3	NC	2
UTICA							
T&C II, T&C III	RING	SLEEVE	NC	TIP	SLEEVE	NC	2, 4
VECTOR							
790	#2	#1	#4	#3	#1	NC	2
IX	#1	#2	NC	#4	#2	NC	1, 2
VII	#1	#2	#3	#4	#2	NC	1, 2
IV	#1	#4	NC	#3	#4	NC	
VOCALINE							
ED-276	#3	#1	NC	#2	#1	NC	4
ED-278	AUDIO-RED	CHAS GND	NC	XMTR CKT-WHT	CHAS GND	NC	2, 4

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Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes
XTAL							
XCB-5, XCB-11	#2	#1	NC	#4	#1	NC	2
XCB-7	#1	#4, #6	#5	#3	#4, #6	NC	1, 2
XCB-12	#4	#5	#2	#3	#5	NC	
XSSB-10	#5	#6	NC	#1	#6	NC	2
XCB-6	#2	#1	#3	#4	#1	NC	1, 2
XCB-4	#1	#2	#5	#3	#2	NC	1, 2
XCB-28, XCB-23A	#1	#2	#5	#3	#2	NC	
XCB-88							8
YAESU							
FL101, FT100B	RING	SLEEVE	NC	TIP	SLEEVE	NC	
FT101E, 301D, FT221R	#2	#1	NC	#3	#1	NC	
ZODIAC							
M5023	#1	#2	#5	#3	#2	NC	1, 2
M5026	#1	#2	NC	#3	#2	NC	1, 2, 4

NOTES

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3. When using the 526T with this transceiver, cut the internal BLUE lead. Refer to the Isolated Switching section of the data sheet.
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ADDENDA

Model 526T Series II (others)	WHITE (white)	SHIELD (shield)	YELLOW (black)	RED (red)	BLUE	BLACK	Notes

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Long Ranger CB Microphones

More public safety and professional business communications transceivers rely on Shure mobile and base station microphones than all other brands combined.

- Shure's patented CONTROLLED MAGNETIC® element can deliver up to twice as much output as conventional CB mics.
- "Tailored" frequency response offers maximum talk power, minimum background noise.
- Incredibly rugged ARMO-DUR® cases are completely corrosion resistant and immune to oil, grease, humidity, salt spray, fumes, and perspiration.

MOBILE UNITS

CB42 Controlled Magnetic® Mobile Microphone . . . the economical way to upgrade your CB unit.

CB43 Controlled Magnetic® Mobile Microphone . . . all-pro performance in a convenient compact case.

CB44 Controlled Magnetic® Mobile Microphone . . . all-pro performance plus modular design for easy maintenance.

CB45 Noise-Canceling Mobile Microphone . . . the clearest way to block out background noise.

BASE STATION UNITS

526T Series Super Punch™ Transistorized Base Station Microphones . . . amplified for more "talk power!"

CB41 Controlled Magnetic® Base Station Microphone . . . the high-output economy favorite.

"the Microphones of the *STARS*"

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AMATEUR RADIO WIRING GUIDE

PREFACE

This Guide contains instructions for connecting the Shure Model 444D and 526T Series II Fixed Station Microphones to many amateur radios. The Guide has been compiled as an aid to Shure microphone customers. Shure is not liable for damage due to wiring errors, errors in the Guide, or for any consequential damages.

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MODEL 526T II[5] 444D	LEAD WIRE COLORS WHITE WHITE	 SHIELD SHIELD	 BLUE BLACK	 RED RED	IMPEDANCE	NOTES
AMECO TX-62	RING	SLEEVE	SLEEVE	TIP	HI	
ATLAS 210/215, 210x/215x	RING	SLEEVE	SLEEVE	TIP	HI	
CLEAR CHANNEL AR3300, AR3500	1	2	2	4		
CLEGG 22er Mark II, Thor 6	RING	SLEEVE	SLEEVE	TIP	HI	
COLLINS 32S-1, KWM-2, KWM-2A, 32S-3	RING	SLEEVE	SLEEVE	TIP	HI	
KWM-380	RING	SLEEVE	SLEEVE	TIP	LO	
DENTRON HF200	RING	SLEEVE	SLEEVE	TIP	LO	
DRAKE Marker-Luxury	4	2	2	1	LO	
TR-4, TR-6, T-4x	RING	SLEEVE	SLEEVE	TIP	HI	
TR-7	1	3	3	2	HI	
TR-72	1	4	4	2	LO	
HALLICRAFTERS HT-32B, -44; SR-150, -160; FPM-200	1	SHELL	SHELL	2	HI	
HT-37	CENTER	SHELL	NC	NC	HI	1
HT-46	RING	SLEEVE	SLEEVE	TIP	HI	
HEATHKIT HW-12A, -22A, -32A, -100, -101; SB-100, -101, -102, -104A, -110, -400, -401	1	SHELL	SHELL	2	HI	
HW-202	1	SHELL	SHELL	2	LO	
HW-2036, -2036A	GREEN	CKT GND	CKT GND	WHITE	LO	

NOTES

1. Push-to-talk switch must be locked On for transmission.
2. Requires grounded audio in receive. See data sheet section on Connections.
3. Connect pin 2 to Shell.
4. Microphone will not operate channel selector.
5. No connection to YELLOW and BLACK leads of 526T Series II.

MODEL 526T II[5] 444D	LEAD WIRE COLORS WHITE WHITE	 SHIELD SHIELD	 BLUE BLACK	 RED RED	IMPEDANCE	NOTES
HEATHKIT						
Pawnee HW-20, Shawnee HW-10	2	3	1	4	HI	
SS-9000, HW-5400	1	4	2	3	HI	
ICOM						
IC-21A, -22A, -30A	1	3	3	2	LO	
IC-22S, -211, -215, -245, -502, -551, -701	1	4	4	2	LO	
IC-255A, -260A, -751, -745	1	7	6	5	LO	
KENWOOD						
TR-7400A, TS-130S	1	3	3	2	LO	
TR-7600	1	5	4	2	LO	
TS-780, -660	1	7	8	2	LO	4
TR-8300, T-599	1	4	4	2	LO	
TS-120S, -180, -530S, -830S, -900	1	4	3	2	LO	
TS-520, -520S, -820	1	4	2	3	HI	
TS-930S, -430S, -940S, -440S, -711, -811	1	7	8	2	HI or LO	4
TS-700SP	1	4	2	3	LO	
TR-7730	1	6	5	2	LO	4
TR-9130	1	6	6	2		
MIDLAND						
13-509	1	2	2	3	HI	
13-510, -510A, -513	1	2	2	4	LO	
NATIONAL						
200	RING	SLEEVE	SLEEVE	TIP	HI	
PACE						
FM152	1	SHELL	SHELL	4	LO	3

ABBREVIATIONS

CKT = circuit
GND = ground
HI = high
LO = low
NC = no connection

MODEL 526T II[5] 444D	LEAD WIRE COLORS WHITE WHITE	 SHIELD SHIELD	 BLUE BLACK	 RED RED	IMPEDANCE	NOTES
SWAN						
500CX, 700CX, 350B	RING	SLEEVE	SLEEVE	TIP	HI	
TEMPO						
One	RING	SLEEVE	SLEEVE	TIP	HI	
2020	1	2	2	4	LO	
TEN-TEC						
Argonaut 509, Argosy II 525D	RING	SLEEVE	SLEEVE	TIP	HI	
Omni D, Triton 4, Delta 580	RING	SLEEVE	SLEEVE	TIP	HI	2
Corsair 560	1	2	2	3	HI	
WILSON						
WE800	5	1	1	3	LO	
1402	1	SHELL	SHELL	4	LO	3
YAESU						
FL-101, FT-100B, FT-401B, FTdx401B	RING	SLEEVE	SLEEVE	TIP	HI	
FT-101E, EE, EX, -225RD	2	1	1	3	HI	
FT-101ZD, -221R, -227R, -301, -301D, -901DM, -902DM	2	1	1	3	LO	
FT-102, -107M, -757, -480R, -707, -980, -ONE, -726R	8	7	7	6	LO	4
FT-720R	1	4	4	3	LO	
FT-501	RING	SLEEVE	SLEEVE	TIP		

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526T II[5]	WHITE	SHIELD	BLUE	RED		
444D	WHITE	SHIELD	BLACK	RED		
AMECO						
TX-62	RING	SLEEVE	SLEEVE	TIP	HI	
ATLAS						
210/215, 210x/215x	RING	SLEEVE	SLEEVE	TIP	HI	
CLEAR CHANNEL						
AR3300, AR3500	1	2	2	4		
CLEGG						
22er Mark II, Thor 6	RING	SLEEVE	SLEEVE	TIP	HI	
COLLINS						
32S-1, KWM-2, KWM-2A, 32S-3	RING	SLEEVE	SLEEVE	TIP	HI	
KWM-380	RING	SLEEVE	SLEEVE	TIP	LO	
DENTRON						
HF200	RING	SLEEVE	SLEEVE	TIP	LO	
DRAKE						
Marker-Luxury	4	2	2	1	LO	
TR-4, TR-6, T-4x	RING	SLEEVE	SLEEVE	TIP	HI	
TR-7	1	3	3	2	HI	
TR-72	1	4	4	2	LO	
HALLICRAFTERS						
HT-32B, -44; SR-150, -160; FPM-200	1	SHELL	SHELL	2	HI	
HT-37	CENTER	SHELL	NC	NC	HI	1
HT-46	RING	SLEEVE	SLEEVE	TIP	HI	
HEATHKIT						
HW-12A,-22A, -32A, -100, -101; SB-100, -101, -102, -104A, -110, -400, -401	1	SHELL	SHELL	2	HI	
HW-202	1	SHELL	SHELL	2	LO	
HW-2036, -2036A	GREEN	CKT GND	CKT GND	WHITE	LO	

NOTES

1. Push-to-talk switch must be locked On for transmission.
2. Requires grounded audio in receive. See data sheet section on Connections.
3. Connect pin 2 to Shell.
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MODEL 526T II[5] 444D	LEAD WIRE COLORS WHITE WHITE	 SHIELD SHIELD	 BLUE BLACK	 RED RED	IMPEDANCE	NOTES
HEATHKIT						
Pawnee HW-20, Shawnee HW-10	2	3	1	4	HI	
SS-9000, HW-5400	1	4	2	3	HI	
ICOM						
IC-21A, -22A, -30A	1	3	3	2	LO	
IC-22S, -211, -215, -245, -502, -551, -701	1	4	4	2	LO	
IC-225A, -260A, -751, -745, -735, -761	1	7	6	5	LO	
KENWOOD						
TR-7400A, TS-130S	1	3	3	2	LO	
TR-7600	1	5	4	2	LO	
TS-780, -660	1	7	8	2	LO	4
TR-8300, T-599	1	4	4	2	LO	
TS-120S, -180, -530S, -830S, -900	1	4	3	2	LO	
T-520, -520S, -820	1	4	2	3	HI	
TS-930S, -430S, -940S, -440S, -711, -811, -140S, -680S	1	7	8	2	HI or LO	4
TS-700SP	1	4	2	3	LO	
TR-7730	1	6	5	2	LO	4
TR-9130	1	6	6	2		
MIDLAND						
13-509	1	2	2	3	HI	
13-510, -510A, -513	1	2	2	4	LO	
NATIONAL						
200	RING	SLEEVE	SLEEVE	TIP	HI	
PACE						
FM152	1	SHELL	SHELL	4	LO	3
RANGER						
AR-3500	1	2	2	4		

ABBREVIATIONS

CKT = circuit
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LO = low
NC = no connection

MODEL 526T II[5] 444D	LEAD WIRE COLORS WHITE WHITE	 SHIELD SHIELD	 BLUE BLACK	 RED RED	IMPEDANCE	NOTES
SWAN						
500CX, 700CX, 350B	RING	SLEEVE	SLEEVE	TIP	HI	
TEMPO						
One	RING	SLEEVE	SLEEVE	TIP	HI	
2020	1	2	2	4	LO	
TEN-TEC						
Argonaut 509, Argosy II 525D	RING	SLEEVE	SLEEVE	TIP	HI	
Omni D, Triton 4, Delta 580	RING	SLEEVE	SLEEVE	TIP	HI	2
Corsair 560	1	2	2	3	HI	
Paragon 585	1	2	2	3		
UNIDEN						
President	1	2	2	3	LO	4
WILSON						
WE800	5	1	1	3	LO	
1402	1	SHELL	SHELL	4	LO	3
YAESU						
FL-101, FT-100B, FT-401B, FTdx401B	RING	SLEEVE	SLEEVE	TIP	HI	
FT-101E, EE, EX, -225RD	2	1	1	3	HI	
FT-101ZD, -221R, -227R, -301, -301D, -901DM, -902DM	2	1	1	3	LO	
FT-102, -107M, -757, -480R, -707, -980, ONE, -726R, -767	8	7	7	6	LO	4
FT-720R	1	4	4	3	LO	
FT-501	RING	SLEEVE	SLEEVE	TIP		

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CLEGG 22er Mark II, Thor 6	RING	SLEEVE	SLEEVE	TIP	HI	
COLLINS 32S-1, KWM-2, KWM-2A, 32S-3	RING	SLEEVE	SLEEVE	TIP	HI	
KWM-380	RING	SLEEVE	SLEEVE	TIP	LO	
DENTRON HF200	RING	SLEEVE	SLEEVE	TIP	LO	
DRAKE Marker-Luxury	4	2	2	1	LO	
TR-4, TR-6, T-4x	RING	SLEEVE	SLEEVE	TIP	HI	
TR-7	1	3	3	2	HI	
TR-72	1	4	4	2	LO	
HALLICRAFTERS HT-32B, -44; SR-150, -160; FPM-200	1	SHELL	SHELL	2	HI	
HT-37	CENTER	SHELL	NC	NC	HI	1
HT-46	RING	SLEEVE	SLEEVE	TIP	HI	
HEATHKIT HW-12A,-22A, -32A, -100, -101; SB-100, -101, -102, -104A, -110, -400, -401	1	SHELL	SHELL	2	HI	
HW-202	1	SHELL	SHELL	2	LO	
HW-2036, -2036A	GREEN	CKT GND	CKT GND	WHITE	LO	

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ICOM						
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KENWOOD						
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TS-780, -660	1	7	8	2	LO	4
TR-8300, T-599	1	4	4	2	LO	
TS-120S, -180, -530S, -830S, -900	1	4	3	2	LO	
T-520, -520S, -820	1	4	2	3	HI	
TS-930S, -430S, -940S, -440S, -711, -811, -140S, -680S	1	7	8	2	HI or LO	4
TS-700SP	1	4	2	3	LO	
TR-7730	1	6	5	2	LO	4
TR-9130	1	6	6	2		
MIDLAND						
13-509	1	2	2	3	HI	
13-510, -510A, -513	1	2	2	4	LO	
NATIONAL						
200	RING	SLEEVE	SLEEVE	TIP	HI	
PACE						
FM152	1	SHELL	SHELL	4	LO	3
RANGER						
AR-3500	1	2	2	4		

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500CX, 700CX, 350B	RING	SLEEVE	SLEEVE	TIP	HI	
TEMPO						
One	RING	SLEEVE	SLEEVE	TIP	HI	
2020	1	2	2	4	LO	
TEN-TEC						
Argonaut 509, Argosy II 525D	RING	SLEEVE	SLEEVE	TIP	HI	
Omni D, Triton 4, Delta 580	RING	SLEEVE	SLEEVE	TIP	HI	2
Corsair 560	1	2	2	3	HI	
Paragon 585	1	2	2	3		
UNIDEN						
President	1	2	2	3	LO	4
WILSON						
WE800	5	1	1	3	LO	
1402	1	SHELL	SHELL	4	LO	3
YAESU						
FL-101, FT-100B, FT-401B, FTdx401B	RING	SLEEVE	SLEEVE	TIP	HI	
FT-101E, EE, EX, -225RD	2	1	1	3	HI	
FT-101ZD, -221R, -227R, -301, -301D, -901DM, -902DM	2	1	1	3	LO	
FT-102, -107M, -757, -480R, -707, -980, ONE, -726R, -767	8	7	7	6	LO	4
FT-720R	1	4	4	3	LO	
FT-501	RING	SLEEVE	SLEEVE	TIP		

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MICROPHONES AND ELECTRONIC COMPONENTS

DATA SHEET

MODEL 444D

CONTROLLED MAGNETIC® FIXED STATION MICROPHONE

GENERAL

The Shure Model 444D is a dual-impedance CONTROLLED MAGNETIC® fixed station microphone with a frequency response tailored for optimum speech intelligibility. The microphone has a multitude of features designed especially for the radio amateur. It has two easily accessible slide switches (impedance selection and Normal or VOX operation) and a smoothly operating, momentary or locking push-to-talk switch bar. The push-to-talk switch is a Shure Million-Cycle double-pole, double-throw leaf type. The leaf switch and four wire (three conductors plus shield) cable are arranged for easy connection to any ham rig. The coiled cord ensures a neat and uncluttered ham shack appearance. The microphone has a height adjustment for operator comfort in transmitting. The high-impact ARMO-DUR® case construction is virtually indestructible, comfortable to the touch in any temperature or humidity, and it will not rust or corrode.

The 444D is supplied with an Amateur Radio Wiring Guide with instructions for connection to many of the most popular transmitters. For those who want a straight cable, one is available as Shure Part Number 90BR2600. The microphone can be converted to Monitor/Transmit switching with the Shure RK199S Split-Bar Conversion Kit.

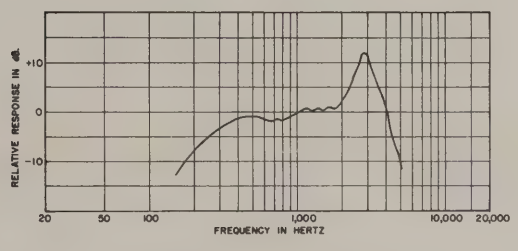
Microphone Features:

- High-output, durable, totally reliable CONTROLLED MAGNETIC cartridge
- Response tailored for speech intelligibility
- Switch selectable high or low impedance
- Normal/VOX switch on microphone
- Double-pole, double-throw, Million-Cycle leaf-type push-to-talk switch with momentary or locking switch bar
- Three-conductor, one-conductor shielded coiled cable
- Cable and switch arranged for instant connection to grounded or isolated transmitter keying
- Rubber feet keep microphone from slipping
- Height adjustment for operator comfort
- Strong ARMO-DUR case impervious to rust and corrosion
- Conversion kit available for Monitor/Transmit switching

SPECIFICATIONS

Type
CONTROLLED MAGNETIC®

Frequency Response
200 to 6,000 Hz (see Figure 1)



TYPICAL FREQUENCY RESPONSE

FIGURE 1

Polar Pattern
Omnidirectional

Impedance (at 1,000 Hz)
Dual. Microphone rating impedance is 150 ohms (190 ohms actual) and "High". For impedance selection, see Connections and Switching.

Load Impedance Range
Low Impedance.....200 ohms to 1,000 ohms
High Impedance.....15 kilohms to 10 megohms

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27A2187 (GH)

(OVER)

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Output Level (at 1,000 Hz)

	IMPEDANCE	
	Low	High
Open Circuit Voltage*.....	−29.5 dB (33 mV)	−11.0 dB (282 mV)
Open Circuit Voltage**.....	−69.5 dB (0.33 mV)	−51.0 dB (2.82 mV)
Power Level***.....	−48.5 dB	

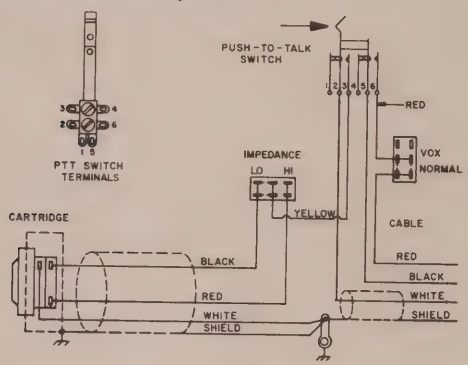
*0 dB = 1 volt per 100 microbars
**0 dB = 1 volt per microbar
***0 dB = 1 milliwatt per 10 microbars

Switches

Push-to-talk, double-pole, double-throw, Million-Cycle leaf-type, momentary or locking, to actuate microphone circuit and transmitter grounded or isolated keying circuit. (See Figure 2.)

Impedance-Selection, slide switch on underside of base, for high- or low-impedance audio inputs.

Normal/VOX, slide switch on underside of base for Normal (push-to-talk) or VOX (voice-operated) transmitter keying. Push-to-talk switch must be locked On for VOX operation.



INTERNAL CONNECTIONS
FIGURE 2

Cable

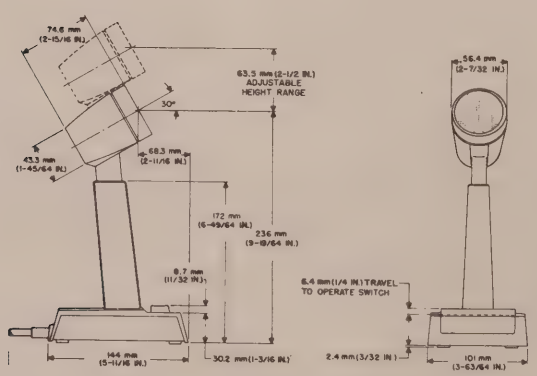
2.1m (7 ft) three-conductor, one-conductor shielded, rubber-jacketed, attached, coiled cable. Retracted coil length approximately 30.5 mm (12 in.)

Case

Black, high-impact ARMO-DUR®

Dimensions

See Figure 3


74.6 mm (2-15/16 IN.)
63.5 mm (2-1/2 IN.) ADJUSTABLE HEIGHT RANGE
30°
43.3 mm (1-45/64 IN.)
68.3 mm (2-11/16 IN.)
172 mm (6-49/64 IN.)
236 mm (9-19/64 IN.)
9.7 mm (11/32 IN.)
6.4 mm (1/4 IN.) TRAVEL TO OPERATE SWITCH
144 mm (5-11/16 IN.)
30.2 mm (1-3/16 IN.)
2.4 mm (3/32 IN.)
101 mm (3-63/64 IN.)
56.4 mm (2-7/32 IN.)

OVERALL DIMENSIONS
FIGURE 3

Net Weight

784 grams (1 lb, 12 oz)

Packaged Weight

1.07 kilograms (2 lb, 6 oz)

CONNECTIONS

Instructions for connecting the microphone to many amateur radios are in the enclosed Amateur Radio Wiring Guide. The cable leads and push-to-talk switch are arranged to permit immediate hookup to transmitters with either isolated or grounded switching.

A piece of tubing is attached to the plug end of the cable for use as a strain relief for plugs with large cable entry holes. Remove the tubing when not required.

The general wiring procedure is as follows.

Phone Plug

For radios that use a phone plug, the normal connections are: RED lead to the tip, WHITE lead to the ring, and SHIELD and BLACK lead to the sleeve.

Microphone Audio Input Circuit

Connect the WHITE lead to the audio input terminal; connect the SHIELD to the ground terminal.

NOTE: If the transmitter requires that the audio circuit be grounded in receive, remove the two screws on the underside of the base. Separate the base from the microphone, taking care not to damage any leads. Solder a jumper lead between push-to-talk terminal 1 and the ground lug (see Figure 2). Reassemble the base to the microphone.

Grounded or Isolated Switching Circuit

Many transmitters ground a relay or dc switching circuit to key the transmitter. For these units, connect the RED lead to the switching terminal; connect the BLACK lead to the ground terminal along with the SHIELD.

Some transmitters close an isolated switching circuit to key the transmitter. For these units, connect the RED lead to one switching terminal; connect the BLACK lead to the other switching terminal.

SWITCHING

This microphone has two slide switches on the underside of the base to select high or low impedance and Normal (push-to-talk) or VOX (voice-operated) keying of a transmitter. The push-to-talk switch is a momentary or locking type.

Push-to-Talk Switch

The push-to-talk switch can be used for momentary transmission by depressing and then releasing it. For longer transmissions, or for VOX operation, lock the switch On by depressing it and sliding it forward. To unlock, slide the switch toward the rear of the microphone and release.

Because the push-to-talk switch connects the microphone audio to the transmitter, it can be released to immediately disable the transmitter VOX circuit if a loud noise inadvertently keys the transmitter in VOX operation.

Impedance Switch

Set the impedance switch on the underside of the base to either high or low impedance to suit the transmitter audio input impedance. If you are not certain which impedance to use, set the switch for "LO" and check whether there is sufficient output to get 100% modulation on the transmitter. If the output is too low, change the switch setting to "HI".

If the switch is incorrectly set to "HI" for a low impedance transmitter, some of the symptoms may include low volume and a lack of intelligibility or a bassy sound.

Function Switch

For push-to-talk operation, set this switch (on the underside of the base) to "Normal" and momentarily depress or lock the push-to-talk switch On for transmission.

For VOX operation, set the switch to "VOX" and lock the push-to-talk switch On. When the transmitter VOX controls have been correctly adjusted, the transmitter will then be automatically keyed by the operator's voice.

NOTE: Setting the 444D for VOX with transmitters that do not have VOX circuits will result in disabling the transmitter keying circuit.

OPTIONAL CONVERSIONS

To increase the versatility of the Model 444D microphone, two optional modifications are available.

A 2.1m (7 ft) straight cable is available as Shuré Part Number 90BR2600.

A split-bar Transmit/Monitor Switch is available for use with transceivers with a receiver squelch circuit. Depressing the Monitor bar disables the receiver squelch circuit so that the operator can determine the presence of signals below the squelch threshold before transmitting. The Monitor switch is either momentary or locking; and the switch can be wired either to ground or to unground the squelch circuit. The Transmit switch bar can be depressed only while the Monitor bar is depressed, thus requiring the operator to verify that the channel is idle before transmitting. The Transmit switch is momentary only and cannot be locked. The Transmit/Monitor Switch Kit is Shure Model RK199S. General microphone wiring instructions are supplied with the kit, but specific transceiver wiring details must be obtained from the transceiver schematic and/or the manufacturer of the unit.

REPLACEMENT PARTS

Cartridge	R111
Cable	70A549
Screen and Grille Assembly	90F1060
Push-to-Talk Leaf Switch	90A3695
Base Plate and Switch Assembly	90A2992
HI/LO Impedance Slide Switch	55C119
Normal/VOX Slide Switch	55A119

OPTIONAL CONVERSION PARTS

Straight Cable	90BR2600
Transmit/Monitor Split-Bar Switch Kit	RK199S

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DATA SHEET

MODEL 526T SERIES II
Super Punch®
MICROPHONE

TRANSISTORIZED BASE STATION MICROPHONE

GENERAL

The Shure Model 526T Series II SUPER PUNCH® base station microphone is designed for clearer transmission and improved reliability. This transistorized microphone can be used to replace ceramic or dynamic, high- or low-impedance microphones supplied as original equipment.

Model 526T Series II provides crisp, undistorted voice response with adjustable volume control for optimum intelligibility of transmission.

The microphone is designed for maximum versatility in base station operation. It has a momentary or locking press-to-talk transmit/receive switch for greatest ease of use, and a modulation level volume control for highest undistorted output with high- or low-impedance inputs. The supplied six-wire cable and triple-pole double-throw switch are arranged for universal microphone-transceiver connection.

The microphone is not affected by heat or humidity, and it is outstanding in its ability to resist mechanical shocks and vibration. Its exclusive ARMO-DUR® case is immune to oil, grease, fumes, salt spray, sun, rust, and corrosion. The "Million-Cycle" leaf-type press-to-talk switch is designed to withstand rigorous operating conditions and constant use.

Microphone Features:

- Dynamic microphone with transistorized preamplifier
- Adjustable volume control for optimum transmitter modulation and maximum intelligibility
- Replaces either ceramic or dynamic original equipment microphones
- Excellent response for single-sideband transmission
- Uses readily available 9-volt battery — low current drain for long life
- Low hum pickup, minimum susceptibility to RF interference
- Momentary or locking press-to-talk transmit/receive switch — "Million-Cycle" leaf-type
- Universal six-wire cable for instant microphone-transceiver connection
- Sturdy, high-impact ARMO-DUR case
- Rugged and dependable under all operating conditions

BATTERY INSTALLATION

Model 526T Series II uses a 9 Vdc battery (Eveready 216 or equivalent—supplied). To install the battery, proceed as follows:

1. Loosen two screws (located underneath base) holding battery retaining clip, and remove battery retaining clip.
2. Connect terminal strap to battery.
3. Insert battery in VELCRO strap of battery retaining clip and fasten VELCRO strap.
4. Insert battery retaining clip in base and tighten screws securely.

CONNECTIONS

Model 526T Series II can be connected to an input (of a transceiver, transmitter, or amplifier) of 500 ohms or more. Refer to the Shure CB and Amateur Radio Wiring Guide enclosed with the microphone for detailed instructions for connecting the 526T Series II to CB or ham transceivers. If your unit is not listed in the Guide, contact your dealer or Shure Brothers Incorporated for information.

A piece of tubing is attached to the plug end of the cable for use as a strain relief for plugs with large cable entry holes. Remove the tubing when not required.

The internal connections of Model 526T Series II are shown in Figure 1.

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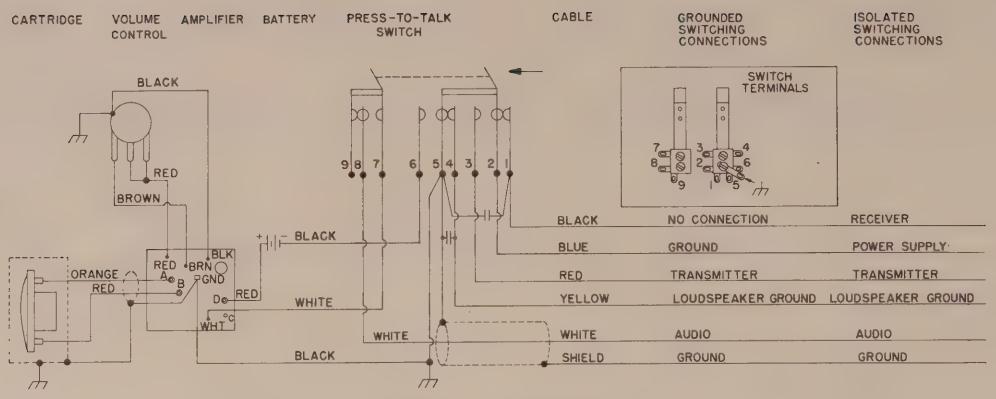


INTERNAL CONNECTIONS
FIGURE 1

The general wiring procedure for transceiver connections is as follows.

Microphone Audio Input Circuit:

1. Connect the WHITE cable lead to the microphone audio input terminal.
2. Connect the SHIELD to chassis or circuit ground of the transceiver (see Guide and CAUTION below).

Electronic or Relay Switching Circuit:

GROUNDED SWITCHING

Most transceivers employ a *grounded* circuit to switch from the receive to the transmit position. To connect the microphone to such a circuit, proceed as follows.

1. At the end of the cable, connect the RED lead to the terminal used to complete the transmitter circuit.
2. Connect the BLUE lead to chassis or circuit ground of the transceiver (see Guide and CAUTION below).
3. Connect the YELLOW lead to the terminal used to complete the receiver circuit. This will usually be a ground return from the loudspeaker circuit. If a microphone switching contact is not required for the loudspeaker ground, insulate (wrap with tape) the YELLOW lead.
4. The BLACK lead is usually not used; insulate the BLACK lead. However, if both a receiver ground and a loudspeaker ground are required, connect the YELLOW lead to loudspeaker ground, and the BLACK lead to the receiver ground.

ISOLATED SWITCHING

In some transceivers, an *isolated* circuit is required to switch power supply voltages rather than grounds. If an isolated switching circuit is required, proceed as follows.

1. At the end of the cable, connect the RED lead to the isolated switch contact terminal used to complete the transmitter circuit.
2. Connect the BLUE lead to the terminal used for the switched power supply.
3. Connect the BLACK lead to the terminal used to complete the receiver circuit. If the power supply is not switched to the receiver circuit by a microphone switching contact, insulate (wrap with tape) the BLACK lead.
4. Connect the YELLOW lead to the loudspeaker *ground return.* If a microphone switching contact is *not* required for the loudspeaker *ground,* insulate the YELLOW cable lead.

CAUTION

Make certain that the SHIELD and/or the BLUE lead are not connected to chassis ground for those models where the Guide specifies they should be connected to circuit ground.

SPECIAL SWITCHING

In some transceivers, special switching circuits are required. Three types are described below. In all of the types, before making the required circuit alterations, remove the microphone baseplate by unscrewing the two screws securing it.

1. If a grounded audio input is required in the receive mode, solder a jumper lead between switch terminal 9 and the ground lug (see Figure 1).
2. If both an isolated and grounded transmit circuit are required, along with a grounded receive circuit (see Figure 1):
   A. Unsolder the WHITE leads from switch terminals 7 and 8.
   B. Solder the WHITE leads together, and insulate the connection.
   C. Cut the BLACK cable lead from terminal 1 and solder it to terminal 9.
   D. Solder a jumper lead between terminal 8 and the ground lug.

   At the end of the cable, the BLUE and RED leads are now the isolated transmit leads; the BLACK lead is the grounded transmit lead; and the YELLOW lead is the grounded receive lead.
3. If both an isolated and grounded receive circuit are required, along with a grounded transmit circuit (see Figure 1):
   A. Unsolder the WHITE leads from switch terminals 7 and 8.

B. Solder the WHITE leads together, and insulate the connection.

C. Unsolder the RED cable lead from terminal 3 and solder it to terminal 9.

D. Solder a jumper lead between terminal 8 and the ground lug.

At the end of the cable, the BLACK and BLUE leads are now the isolated receive leads; the YELLOW lead is the grounded receive lead; and the RED lead is the grounded transmit lead.

VOLUME CONTROL

When the 526T Series II replaces a dynamic (usually low-impedance) microphone supplied as original equipment, the volume control should be set at the lower ranges to prevent overmodulation and unintelligible transmission. Correct modulation can be checked on the modulation level indicator.

When the 526T Series II replaces a ceramic (usually high-impedance) microphone supplied as original equipment, the volume control should be set at the upper ranges for correct modulation as indicated on the modulation level indicator.

WARNING

Too high a volume control setting causes overmodulation, interference, channel splatter, and unintelligible voice transmission. Carefully check the volume control setting.

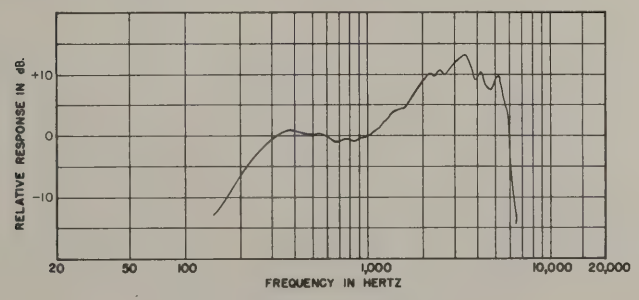
LOCKING PRESS-TO-TALK SWITCH

The fingertip control bar of the press-to-talk switch can be used in a momentary or locked-on position. For use as a momentary switch, depress the control bar and release after transmission. To lock the switch in the On position, depress the control bar and move it forward with the fingertips. To unlock the switch, move the control bar backward and remove pressure.

SPECIFICATIONS

Type
Dynamic (with transistor preamplifier)

Frequency Response
200 to 6,000 Hz (see Figure 2)



TYPICAL FREQUENCY RESPONSE
FIGURE 2

Polar Pattern
Omnidirectional

Output Impedance
5,000 ohms

Load Impedance
500 ohms minimum

Output Level (at 1,000 Hz with 100 kilohm load)
Adjustable from 0.63 to 14 mV for 1 microbar input

Signal Handling Capability (with 50 kilohm load)
111 dB SPL at 1,000 Hz produces 1.0V with volume control at maximum

Battery Type
9 Vdc (Eveready 216 or equivalent)

Battery Drain
0.9 mA

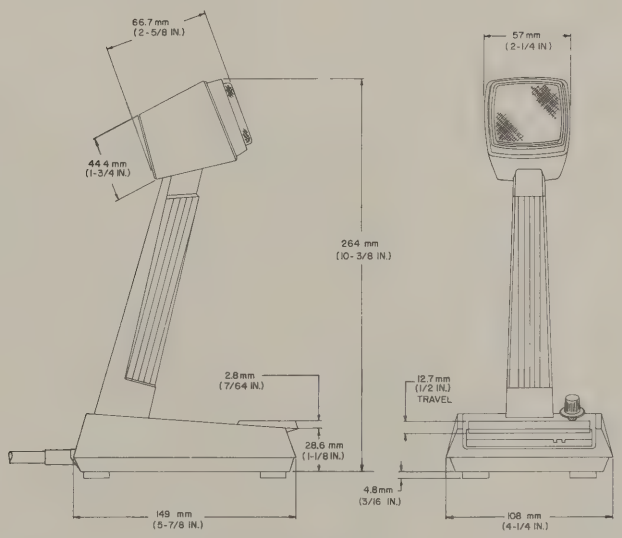
Battery Life
300 hours minimum, replace after 1 year

Switches
Press-to-talk: single-bar, momentary or locking, leaf-type triple-pole double-throw switch

Cable
2.1m (7 ft) five-conductor, one-conductor shielded, rubber jacketed, attached, coiled cable

Case
Black, high-impact ARMO-DUR®

Dimensions
See Figure 3



OVERALL DIMENSIONS
FIGURE 3

Net Weight
920 grams (2 lb)

Packaged Weight
1.2 kilograms (2 lb, 11 oz)

REPLACEMENT PARTS

Cartridge	R96
Grille Assembly	90D1844
Battery Retaining Clip	90A2351
Baseplate	53A1459A
Coiled Cable	70A544
Switch Blade Assembly (6-blade)	90A2595
Switch Blade Assembly (3-blade)	90A1333
Press-to-talk Control Bar	65A1205A
Volume Control	46A060
Printed Circuit Assembly	90A2721

FULL ONE-YEAR WARRANTY

Shure Brothers Incorporated ("Shure"), 222 Hartrey Avenue, Evanston, Illinois 60204, warrants to the owner of this product that it will be free, in normal use, of any defects in workmanship and materials for a period of one year from date of purchase. You should retain proof of date of purchase. Shure is not liable for any consequential damages. If this Shure product has any defects as described above, carefully repack the unit and return it prepaid to:

Shure Brothers Incorporated
Attention: Service Department
1501 West Shure Drive
Arlington Heights, Illinois 60004

If you are not in the United States, return the unit to your dealer or Authorized Service Center for repair. The unit will be repaired or replaced and returned to you promptly, and if it cannot be repaired or replaced, you may elect to receive a refund.

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PROFESSIONAL PRODUCTS

GENERAL

The Shure Model SM59 is a high-quality, unidirectional dynamic microphone designed for professional applications in sound reinforcement, broadcasting and recording. The SM59 has a wide-range frequency response and a unique cartridge shock mount design which minimizes handling noise and maximizes vibration cancellation. A special "pop" filter protects against explosive breath sounds. A slim lower case, balanced weight, and sleek appearance combine to make the SM59 especially suitable for stage use. The SM59 is a lightweight, rugged unit of aluminum, zinc and stainless steel construction, finished in matte champagne enamel. A microphone swivel adapter is provided. Model SM59-LC is supplied without a cable.

Model SM59 Features:

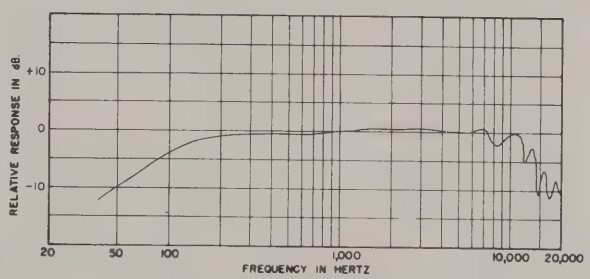
- Wide-range, smooth frequency response; provides clean, natural reproduction of voice and music
- Special mechano-pneumatic shock mount virtually eliminates normal handling noise and pickup of floor/stand vibrations
- Wire-mesh screen with built-in filter provides excellent "pop" protection
- Built-in hum-bucking coil for maximum electromagnetic hum cancellation
- Highly effective cardioid pickup minimizes background noise and undesirable location acoustics
- Versatile—for use in the hand or on a stand—indoors or outdoors
- Smooth, sleek styling and lightweight, balanced case for excellent appearance and ease of use
- Rugged—provides years of dependable operation with unchanging performance

The SM59 is a low-impedance microphone and is recommended for use when long cable lengths are required or under conditions of severe hum disturbance. The permissible cable length is practically unlimited, since neither response nor level is affected. If required, the SM59 may be connected to a high-impedance mixer input using a Shure A95UF Line Matching Transformer.

SPECIFICATIONS

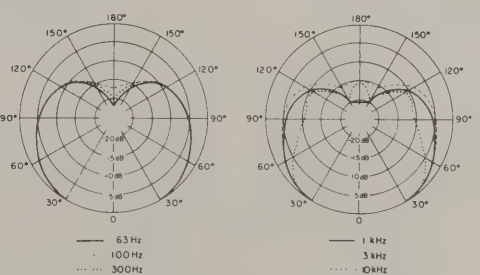
Type
Dynamic

Frequency Response
50 to 15,000 Hz (see Figure 1)



TYPICAL FREQUENCY RESPONSE
FIGURE 1

Polar Pattern
Cardioid (unidirectional)—uniform with frequency, symmetrical about axis (see Figure 2)



TYPICAL POLAR PATTERNS
FIGURE 2

Impedance
Microphone rating impedance is 150 ohms (160 ohms actual) for connection to microphone inputs rated at 19 to 300 ohms

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Patent No. 3,989,905

Output Level (at 1,000 Hz)
Open Circuit Voltage ..... −83 dB (.07 mV)
(0 dB = 1 volt per microbar)
Power Level ..... −61 dB
(0 dB = 1 milliwatt with 10 microbars)

Hum Sensitivity
12.5 dB typical equivalent SPL in a 1 millioersted field

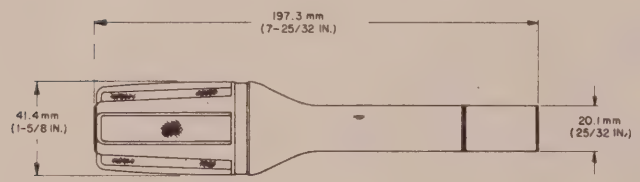
Phasing
Positive pressure on diaphragm produces positive voltage on pin 2 relative to pin 3 of plug element

Swivel Adapter
Positive action, adjustable through 90° from vertical to horizontal, permits easy removal for hand-held use, suitable for mounting on stand with 5/8"-27 thread

Operating Temperature Range
−29° to 74°C (−20° to 165°F)

Case
Aluminum with champagne enamel finish

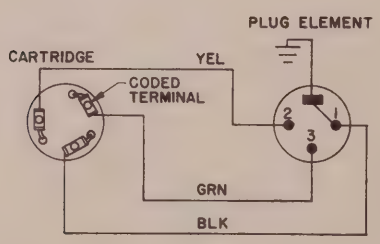
Dimensions
See Figure 3



OVERALL DIMENSIONS
FIGURE 3

Net Weight
215 grams (7.6 oz)

Packaged Weight
1.1 kg (2 lb, 7 oz)



INTERNAL CONNECTIONS
FIGURE 4

FURNISHED ACCESSORY

Swivel Adapter A57D

REPLACEMENT PARTS

Grille Assembly 90CD2600
Cartridge and Case Assembly R100
Plug Shell Assembly 90CE2600
Plug Element 90A1984

OPTIONAL ACCESSORIES

Windscreen A59WS-BR
Desk Stand S37A, S39A
Line Matching Transformer A95UF
Cable (7.6m−25 ft) C25F

ARCHITECTS' SPECIFICATIONS

The microphone shall be a moving coil (dynamic) type with a frequency response of 50 to 15,000 Hz. The unit shall have a cardioid polar characteristic. The cancellation at the sides shall be approximately 6 dB, and the cancellation at the rear shall be greater than 15 dB at 100 Hz and greater than 20 dB at 1000 Hz when measured with the front of the microphone two feet from the sound source. The microphone shall be low impedance with a rated impedance of 150 ohms for connection to microphone inputs rated at 19 to 300 ohms. The microphone output shall be −61 dB where 0 dB = 1 milliwatt with 10 microbars.

The microphone shall be supplied with a swivel adapter, adjustable through 90° from vertical to horizontal, and suitable for mounting on a stand having a 5/8"-27 thread.

The overall dimensions of the microphone shall be 197 mm (7-25/32 in.) in length and 41.4 mm (1-5/8 in.) in diameter.

The microphone shall be the Shure Model SM59 or equivalent.

GUARANTEE

This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor. This guarantee is in lieu of any and all other guarantees or warranties, express or implied, and there shall be no recovery for any consequential or incidental damages.

SHIPPING INSTRUCTIONS

Carefully repack the unit, insure it, and return it prepaid to:

Shure Brothers Incorporated
Attention: Service Department
222 Hartrey Avenue
Evanston, Illinois 60202-3696

If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.

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DATA SHEET **MODEL R5R**

CONTROLLED MAGNETIC CARTRIDGE REPLACEMENT

The Shure Model R5R is a high-impedance Controlled Magnetic Cartridge and is a direct replacement for the cartridge in Shure Model 444 Communications Microphone.

When installed in the microphone case, the high-impedance open circuit output level is —53.0 dB (2.25 mV).

0 dB = 1 volt per microbar.

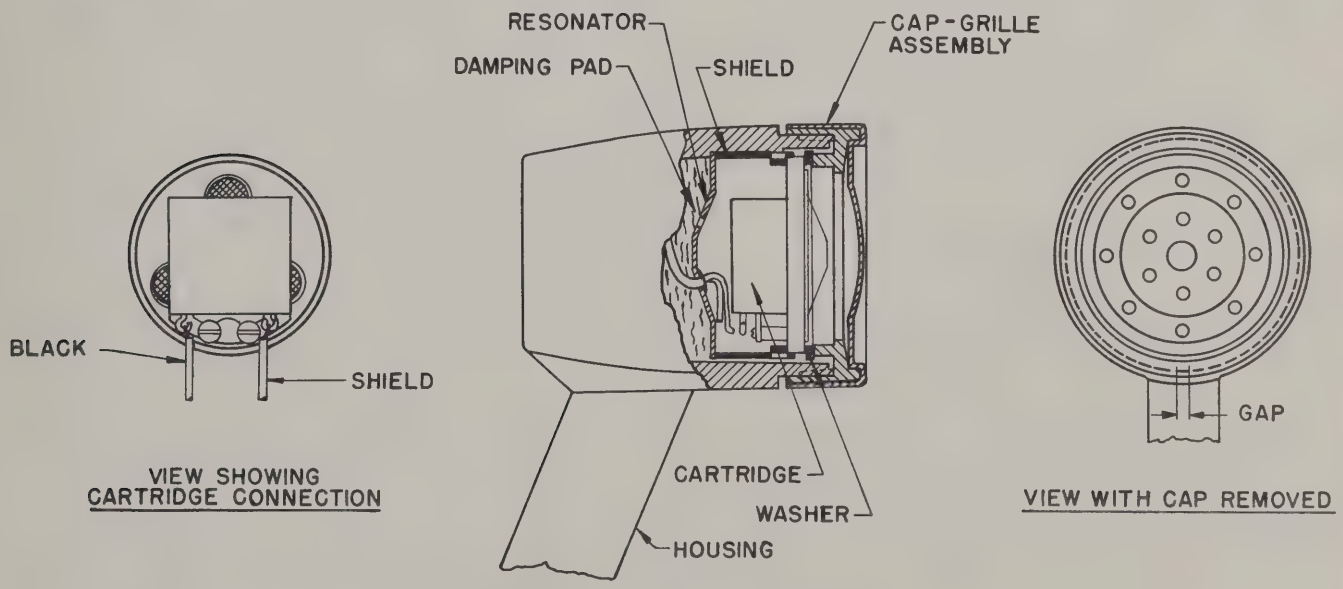
INSTALLATION AND CONNECTIONS

To replace the R5R in the Shure Model 444, proceed as follows:

1. Holding upper part of microphone housing firmly, unscrew (turn counterclockwise) and remove cap-grille assembly and fiber washer under cap-grille assembly (see Figure 1).
2. Remove old cartridge from microphone housing (shield, resonator, and damping pad need not be removed).
3. Unsolder leads from old cartridge terminals.
4. Connect leads to the new replacement cartridge. Note lead colors and corresponding terminals.
5. Assemble new cartridge into housing, making sure it is properly seated on the projections of the shield. Cartridge terminal must be adjacent to the gap in the shield.
6. Reassemble fiber washer and cap-grille assembly. Make sure cap is tightened securely.

Guarantee: This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from the date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor.

Shipping Instructions: Carefully repack the unit and return it prepaid to the factory. If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.



REPLACEMENT OF CARTRIDGE
Figure 1

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DATA SHEET

Models 440 and 440SL

General: Model 440 and Model 440SL microphones are pressure operated units using the balanced armature controlled magnetic principle and especially designed to have high intelligibility for radio communications and are especially designed for the narrow audio frequency range required for single side band transmission. The microphones have high output level, smooth response, and a semi-directional pickup characteristic.

The Model 440SL is an integral assembly of a microphone, a grip-to-talk, slide-to-lock switch (see operation) and a desk stand. The grip-to-talk switch is similar to the Shure A88A, having the same long-life features to withstand the most severe field requirements of paging and dispatching systems. The switch has a large comfortable grip bar which minimizes hand and finger fatigue. After the bar is pressed, a positive downward pressure on the grip bar locks the switch. The switch cannot be accidently locked, and the unit can be picked up without actuating the switch.

The microphone case, switch case, and the stand are of die cast metal and are streamlined for improved acoustical performance and modern appearance.

Applications: The Model 440 and the Model 440SL are particularly suited for use in single side band transmission as used in mobile and fixed station use in Police, Fire, Utility, Forestry Transportation Services and Amateur Communications. The response cuts off sharply below 300 c.p.s. and above 3000 c.p.s. with an average rising characteristic for speech intelligibility. This response characteristic is especially effective in the presence of noise.

The Model 440 and 440SL are, also, suitable for public address, call systems and radio telephone.

Installation: The Model 440 microphone has a standard $\frac{5}{8}$"—27 thread and can be mounted on any desk or floor stand.

In the Model 440SL assembly, the microphone and switch are pre-assembled, but the base and cable and plug assembly are separate. To assemble base to switch use the following instructions:

1. Place microphone switch assembly in the recess at the top of the base. Fasten switch to base by means of special attachment screw included. Use a large screw driver or coin to turn screw down tightly.
2. Insert cable-connector plug into microphone receptacle. Turn locking ring down tightly.
3. Place cable in groove in the bottom rear of the base. Clamp cable to base by means of the clamping plate and two machine screws which are furnished.

Connections: Most amateur equipment is wired to use either VOX (voice operated relay control) or a push-to-talk switch. The Model 440SL has been designed to provide maximum flexibility with both types of operation.

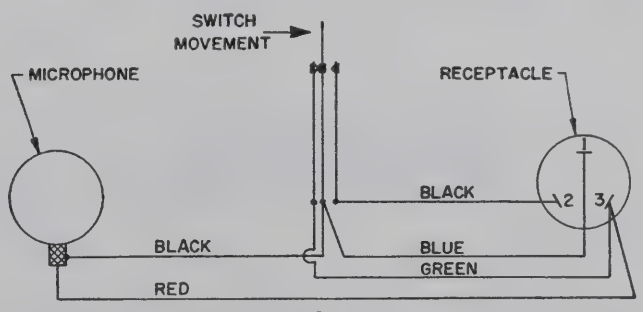

FIG. A

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27A158. (8-61)

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A. Using the microphone as supplied, the grip-to-talk switch operates both the microphone circuit and an external relay or control circuit. Connect all leads to the proper terminals of the equipment. (See equipment manual). By using the white and shield leads (microphone circuit) or by connecting the shield and black leads together and connecting to the proper terminals, the grip-to-talk switch will operate the microphone circuit but the external relay or control circuit is not operated, and the microphone can be VOX operated with the microphone being muted by the switch.

B. By the minor modification of cutting the green lead (see Figure A and instructions below) the microphone circuit is removed from the switch action and the switch will operate the external relay or control circuit in push-to-talk operation. The microphone can be used for VOX operation and the microphone can not be muted.

The modification is made as follows:

1. Remove the integral assembly of the microphone and switch from the desk stand.
2. Remove the 4-40 phillips head screw from the bottom of the switch case and pull out the bakelite receptacle.
3. Disconnect the green wire from pin #3, insulate the bare end of the wire, and put the wire back into the switch case.
4. Replace the bakelite receptacle and the 4-40 phillips head screw.
5. Assemble the microphone and switch to the desk stand.

To obtain optimum flexibility between either VOX or push-to-talk operation.

C. The Shure Model A87K Kit will modify the microphone by placing a switch in the black lead from the receptacle. The grip-to-talk switch of the microphone can then be used to operate the microphone circuit and the external relay or control circuit can be operated or NOT operated by grip-to-talk switch by changing the position of the A87K switch. This will permit instant change-over from VOX operation to push-to-talk operation and still retain the microphone circuit switch to mute the microphone in either operation.

Operation: No special precautions beyond ordinary care are necessary in the operation of the Models 440 and 440SL Microphones. They will operate satisfactorily under ordinary conditions in hot and cold climates. To retain the full strength of the permanent magnet and to maintain alignment of structure, dropping or other severe mechanical shocks should be avoided.

The 440SL microphone, as supplied, has a switch which is a momentary contact (non-locking) type. For use as a grip-to-talk switch, grasp the switch with hand pressing the bar with fingers. If desired, the switch may be converted to a grip-to-talk, slide-to-lock switch. This may be done by loosening the number 5-40 Phillips Head machine screw, directly beneath the switch bar, rotating the "Stop-Plate" one-half turn and retightening the machine screw. To lock, press the bar and simultaneously apply force downward with the index finger until the switch bar slides and is locked in position. To unlock, slide bar up with fingers.

Specifications:

	MODEL 440	MODEL 440SL
Height Overall	2 13/32 (61.1mm) Dia.	9 3/8" (238.1mm)
Length Overall	3 1/4" (82.6mm)	7" (177.8mm)
Width Overall	2 13/32 (61.1mm) Dia.	5" (127mm)
Finish	Gray and Chrome	Gray and Chrome
Net Weight with 7' (2.1m) Cable	3/4 lb. (340g)	2 1/2 lbs. (1134g)
Shpg. Weight with 7' (2.1m) Cable	1 1/2 lbs. (680g)	5 lbs. (2722g)

Voltage Sensitivity

Model 440 and 440SL

Open circuit voltage .....— 52.5 db *

RETMA Microphone Rating G_M

Sensitivity .....—142.3 db **

* odb = 1 volt per microbar

**RETMA Standard SE-105 August 1949

Microbar = one dyne per square centimeter

Frequency Response: 300 to 3000 c.p.s.

Recommended Load Impedance:
100,000 ohms or more

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from the factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

SHURE *The Mark of Quality*

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DATA SHEET

MODEL 520 "GREEN BULLET" SERIES

High-Level Controlled Reluctance Microphones

General: Model 520 series microphones are pressure operated units using the balanced armature, controlled reluctance principle. The microphones have high output level, smooth response, and a semi-directional pickup characteristic.

The cast metal case is streamlined for improved acoustical performance and modern appearance.

The Model 520 is provided with a 7 ft. single conductor shielded cable. The Model 520B has a 7 ft. two conductor shielded cable.

Applications: Model 520 series microphones are suitable for public address, recording, call systems, radio telephone equipment, and similar applications. Because of their high output level, Model 520 series microphones may be used with all standard public address amplifiers.

These microphones are unusually rugged and practically immune to severe moisture and temperature conditions.

Connections: MODEL 520B IS A MEDIUM IMPEDANCE UNIT (150-250 OHMS). The microphone is wired for balanced line operation and is recommended for use where long cable lengths are required or under conditions of severe hum disturbances. Model 520B can be fed into a standard medium impedance amplifier (Figure A-1), or into an amplifier with high impedance input (Figure A-2). In the latter case, Shure Model A86A cable-type transformer is available for coupling the medium impedance line to the input of high impedance amplifiers.

If additional lengths of cable are desired with the use of the 520B, a two conductor shielded cable is recommended.

MODEL 520 IS A HIGH IMPEDANCE UNIT. It can be used with any crystal microphone amplifier or other amplifier with an input impedance of 100,000 ohms or more. (See Figure A-3).

In certain amplifiers, the grid bias is obtained by having a grid leak between grid and cathode. When such amplifiers are used with any controlled reluctance or dynamic-type microphones, it is recommended that a coupling condenser be connected between the microphone and the input grid. The condenser should be .01 mfd. or larger.

If additional lengths of cable are desired with the use of the Model 520, a single conductor shielded cable can be used. Cable lengths longer than 25 feet will be accompanied by some loss of high frequency response.

The shield, chassis or amplifier ground should be securely connected to a water pipe or similar ground to prevent shock hazard during operation of the amplifying system.

Installation: Model 520 series microphones have the standard $\frac{5}{8}$"-27 thread and can be mounted on any Shure desk or floor stand.

Operation: No special precautions beyond ordinary care are necessary in the operation of the Model 520 series Microphones. They will operate satisfactorily under ordinary conditions in hot and cold climates. To retain the full strength of the permanent magnet and to maintain alignment of structure, dropping or other severe mechanical shocks should be avoided.

SPECIFICATIONS

MODELS 520 AND 520B	
Diameter of Case	$2\frac{13}{32}$"
Length Overall	$3\frac{1}{4}$"
Finish	Metallic Green and Chrome
Net Weight (with 7' cable)	$\frac{3}{4}$ lb.
Shipping Weight	$1\frac{1}{2}$ lb.
Code Word (including 7' cable) 520	RUDAL
520B	RUDAZ

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27A41 (7-57)

(OVER)

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SPECIFICATIONS, Continued

Voltage Sensitivity:

Model 520B

Open Circuit Voltage	—71.5 db (*)
Loaded with 250 ohms	—77.0 db (*)
Power Level into 250 ohms	—51.0 db (**)
RTMA Microphone Rating G_M (Sensitivity)	—143.2 db (***)

Model 520

Open Circuit Voltage	—52.5 db (*)
RTMA Microphone Rating G_M (Sensitivity)	—142.3 db (***)

* 0 db = 1 volt per microbar
** 0 db = 1 milliwatt with 10 microbars
*** RTMA Standard SE-105 August 1949
Microbar = one dyne per square centimeter

Frequency Response: 100 to 9000 c.p.s.

Recommended Load Impedance:

Model 520B .....150 to 250 ohms
Model 520 .....100,000 ohms or more

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from the factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

FIG. A

FIG. A-1
MODEL 520B

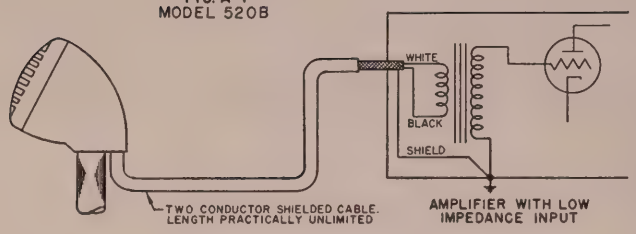


FIG. A-2
MODEL 520B

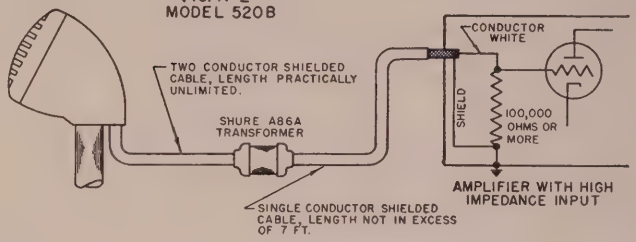
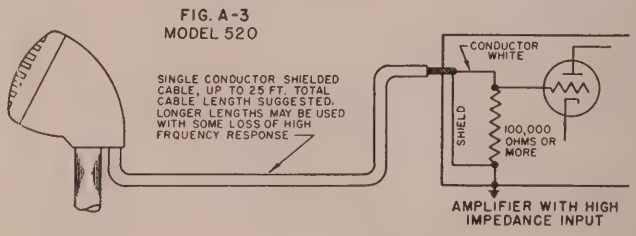

CONDUCTOR WHITE
TWO CONDUCTOR SHIELDED CABLE, LENGTH PRACTICALLY UNLIMITED.
SHURE A86A TRANSFORMER
SHIELD
100,000 OHMS OR MORE
AMPLIFIER WITH HIGH IMPEDANCE INPUT
SINGLE CONDUCTOR SHIELDED CABLE, LENGTH NOT IN EXCESS OF 7 FT.

FIG. A-3
MODEL 520


CONDUCTOR WHITE
SINGLE CONDUCTOR SHIELDED CABLE, UP TO 25 FT. TOTAL CABLE LENGTH SUGGESTED. LONGER LENGTHS MAY BE USED WITH SOME LOSS OF HIGH FRQUENCY RESPONSE
SHIELD
100,000 OHMS OR MORE
AMPLIFIER WITH HIGH IMPEDANCE INPUT

SHURE BROTHERS
INCORPORATED
Microphones and Acoustic Devices
225 WEST HURON STREET :: CHICAGO 10, ILLINOIS
PHONE DElaware 7-4550 :: CABLE: SHUREMICRO

DATA SHEET

DATE: MARCH, 1952.

SUBJECT: Model 55s Multi-Impedance "Small Unidyne" Dynamic Microphone.

55s Multi-Impedance "Small Unidyne" Microphone
(Ultra-Cardioid, Unidirectional, Moving-Coil Dynamic)

General: The Model 55s is a small, compact Microphone in which high-fidelity response and excellent directional pattern are achieved. The Ultra-Cardioid unidirectional characteristic of the microphone (obtained by the "Uniphase" principle*) provides highly satisfactory operation under adverse acoustic conditions. It permits placement of the microphone at a distance from the performer 75% greater than is possible with non-directional (omnidirectional) microphones.

The new "Small Unidyne," Model 55s, employs the Shure-Patented Acoustic phase shift network; the moving-coil system has been designed for high efficiency and extended, smooth, frequency response. Large air-gap clearances, together with a rugged coil construction, provide immunity of the moving system to abnormal atmospheric conditions and severe mechanical shock.

The case is modern in design, with attractive streamlining and grille treatment. Model 55s is small in size, and is therefore ideal for installations where it is desired to keep the microphone size to a minimum and still retain maximum operating efficiency.

A new self-adjusting swivel permits tilting of the head through 80° so that the microphone can be aimed at the source of sound. A built-in cable connector is provided; and a 20 foot, high-quality, two-conductor shielded cable with microphone plug attached is included.

Applications: Model 55s is ideal for high-quality public address, theatre-stage sound systems, and recording applications. Because of its unusual ruggedness and reliability, Model 55s microphone is, also, recommended for fixed station use in the Police, Fire, and Transportation services. For studio broadcasting and T.V. use, and similar applications where the utmost in quality is desired, Model 556s Broadcast Unidyne is recommended.

The true unidirectional characteristics of the Model 55s provides an easy solution to the feedback problem in reverberant locations, facilitates orchestral placement, permits best utilization of space in small broadcast studios, and provides practically complete exclusion of unwanted noises.

Installation: All microphones have the standard 5/8"-27 thread and may be mounted on any conventional desk, banquet, or floor stand. Physical dimensions are shown in Fig. C. When long lines are used, care should be taken that the cable does not parallel A.C. power lines for long distances to avoid A.C. hum induction.

Connections: The Model 55s Microphone is of the multi-impedance type. Model 55s may be connected directly to a 30-50 ohm line, a 150-250 ohm line, or high impedance input. Selection of these impedances is accomplished by changing the position of the switch at the rear of the microphone. The switch positions are marked "L" for low impedance (30-50 ohms), "M" for medium impedance (150-250 ohms), and "H" for high impedance (35,000 ohms).

In the low and medium impedance positions, Model 55s may be connected directly to a standard low or medium impedance input amplifier (Fig. A-1), or into an amplifier with high impedance input (Fig. A-2). In the latter case, Shure Model A86A Cable-Type Transformer is available for coupling the low impedance line to the amplifier input. The double winding primary of the Shure Model A86A Cable type transformer permits coupling either a 30-50 ohm line or 150-250 ohm line to high impedance input.

The low and medium impedance positions are recommended where long cable lengths are required or under conditions of severe hum disturbances. The permissible line length is practically unlimited, since neither response nor level is appreciably affected by reasonable lengths of line.

The high impedance position on the Model 55s Microphone may be used with any high gain microphone amplifier or other amplifier with an input impedance of 100,000 ohms or more (See Fig. A-3). For best high frequency response in high impedance the total cable lengths should not exceed 25 feet; longer cable lengths may be used with some loss of high frequency response. The additional loss at 5000 cycles is of the order of 2.5 db for an additional 25 ft. length of cable (50 ft. total) and 6 db for an additional 50 ft. length (75 ft. total). If the Model 55s Microphone is used in the high impedance position, single conductor shielded cable may be used to provide additional cable lengths; also, the two-conductor cable furnished with the Microphone may be replaced with single conductor shielded cable, if the microphone is intended to operate directly into high impedance (grid) input only. In this instance, the number one pin and the number two pin of the cable plug must be shorted together and connected to the shield of the cable.

The shield, chassis or amplifier ground should be securely connected to a water pipe or similar ground to prevent shock hazard during operation of amplifying system.

When used with amplifiers using the grid leak type of bias at the input tube, it may be desirable to use a .01 mfd. condenser between the microphone and the input grid circuit.

Operation: The microphone should be placed in its operating position before turning up the volume controls of the amplifier. Jarring or excessive moving of the instrument should be avoided while the system is in operation.

No special precautions beyond ordinary care are necessary in the operation of the Model 55s Dynamic microphone. It will operate efficiently and dependably under all ordinary conditions in hot and cold climates. To retain the full strength of the highly efficient permanent magnet and to maintain alignment of the structure, dropping or other severe mechanical shocks should be avoided.

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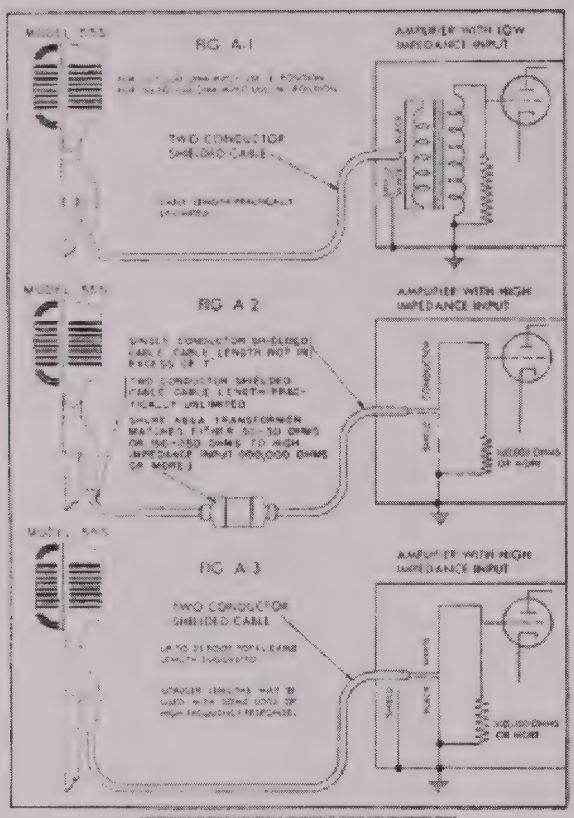

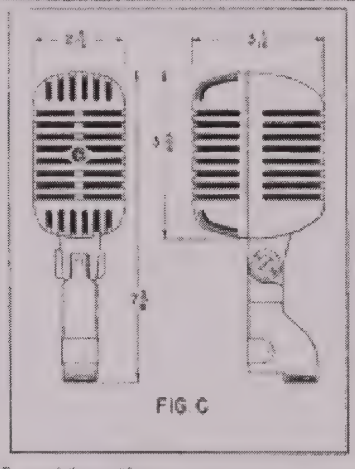

Acoustic Considerations: The front response-frequency characteristic of the Model 55s is shown in Figure B. The smooth, wide-range characteristic is excellent for high-quality reproduction of music and speech.

"Ultra-Cardioid" describes the horizontal polar characteristic of the Model 55s. This polar characteristic resembles a cardioid but is slightly more directional. There is a wide, useful pickup angle at the front of the microphone, while the response at the sides is down 6 db from the front response. The rear response is down approximately 15 db. The Model 55s fulfills these requirements over a broad range of frequencies. The true unidirectional characteristic of the microphone should not be confused with the relatively slight directional effect at high frequencies which can be produced by baffle effects in the conventional pressure microphone.

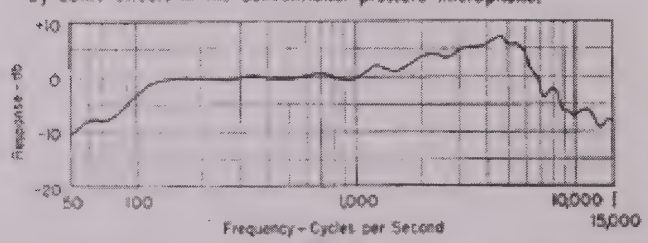

Fig. B.

Response-Frequency Characteristic Model 55s Microphone.

J7A102, 3-52.

The result of this unidirectional characteristic is elimination of acoustic feedback at volume levels which would cause considerable feedback with conventional semidirectional or omnidirectional microphones. In practically all cases it is possible to increase loudspeaker levels when a Unidyne is installed. By directing the dead side (rear) of the microphone towards the audience or other source of interfering sound, pickup can be concentrated on the desired source. Reverberation energy pickup is decreased approximately two-thirds. The microphone can be placed close to reflecting surfaces without objectional effects if the rear side of the microphone is toward the reflecting surface. This is particularly valuable in small broadcast studios. It is desirable to experiment with microphone placement and orientation in order to secure the greatest benefits from the unidirectional characteristic.

Specifications

1000 C.P.S. Response:

Model 55s "L" Position
- Open Circuit Voltage Level ..... — 87.9 db*
- Loaded with 50 ohms ..... — 92.4 db*
- Power Level into 50 ohms ..... — 59.4 db**
- RTMA Microphone Rating G_{SI} (Sensitivity) ... —153.6 db***

Model 55s "M" Position
- Open Circuit Voltage Level ..... — 81.0 db*
- Loaded with 250 ohms ..... — 86.1 db*
- Power Level into 250 ohms ..... — 60.1 db**
- RTMA Microphone Rating G_{SI} (Sensitivity) ... —152.8 db***

Model 55s "H" Position
- Open Circuit Voltage Level ..... — 60.5 db*
- Loaded with 100,000 ohms ..... — 62.3 db*
- RTMA Microphone Rating G_{SI} (Sensitivity) ... —157.0 db***

(*) 0 db = 1 Volt Per Microbar
(**) 0 db = 1 Milliwatt with 10 Microbars
(***) RTMA Standard SE-105, August 1949.

Recommended Load Impedance:

Model 55s "L" Position 30-50 ohms.
Model 55s "M" Position 150-250 ohms.
Model 55s "H" Postion 100,000 ohms or more.

MODEL 55s	
Code Word	RUDOT
Net Wt.	3⅛ lb.
Shipping Weight	4¼ lb.
Cable	20 ft. Two-Conductor
Height, Overall *	7⅜"
Height, Case *	3 11/16"
Width *	2 5/16"
Depth *	3½"
Finish	Satin Chrome

*See Fig. C.

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone is subjected to accident or abuse or if the case is opened.

MODEL 55s
Architect's Specification

The microphone shall be a moving coil type microphone with a frequency range of 50 to 15,000 c.p.s. This unit shall have an "Ultra-Cardioid" horizontal polar characteristic. The cancellation at the sides shall be approximately 6 db and the cancellation at the rear shall be in the order of 15 db. The microphone shall be equipped with a three-position impedance change switch for adjusting the microphone rating impedance to 38 ohms, 150 ohms or 40,000 ohms. The microphone rating G_{SI} (sensitivity) at 1000 c.p.s. shall be within ± 3 db of the following levels:

"L" Position of switch — 153.6 db
"M" Position of switch — 152.8 db
"H" Position of switch — 157.0 db
RTMA Standard SE-105 August 1949

The microphone shall be provided with a swivel adjustable from 0° to 80° and it shall have a detachable cable connector capable of connection to a two-conductor shielded cable. The microphone will mount on stand having ⅝"-27 thread. The overall dimensions shall be 7⅜ ± ¼ inches in height, 2 5/16 ± ⅛ inches in width, and 3½ ± ⅛ inches in depth.

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Phone DElaware 7-4550 • Cable: SHUREMICRO
MICROPHONES and ACOUSTIC DEVICES

FEBRUARY 1954

SUBJECT: **MODEL 737A "MONOPLEX" CRYSTAL MICROPHONE**

General: Model 737A "Monoplex" is a high output Super-Cardioid Crystal Microphone employing the patented Shure "Uniphase" principle. The Super-Cardioid characteristic allows highly satisfactory operation under adverse conditions of background noise and reverberation where a conventional microphone would be practically useless.

The "Monoplex" contains a diaphragm-type element combined with acoustical networks which cause cancellation of sound pressures for sounds incident from the rear. The crystal is "Metal Seal" covered to withstand adverse climatic conditions. The case is pivoted at the rear and may be conveniently pointed in the direction of the desired sound, or pointed upwards for non-directional horizontal plane pick-up. The rich satin-chrome case is designed for improved acoustical performance and modern appearance.

The microphone is provided with a detachable plug and a 20 foot single conductor shielded cable.

Applications: The model "737A" "Monoplex" is excellent for high quality public-address communications, all types of recording, and similar applications.

The true wide-range uni-directional characteristic of the "Monoplex" creates an easy solution to the feedback problem in reverberant locations, facilitates orchestral placement, permits good utilization of space in small recording or broadcasting studios, and allows a practically complete exclusion of unwanted noises.

By pivoting the microphone upwards, a 360° non-directional horizontal plane characteristic is obtained which is useful for group or roundtable pickup.

Frequency response is from 60 to 10,000 cycles over a wide range angle at the front, yet practically unaffected by sound approaching from the rear. Rear response is down approximately 15 db permitting more volume without feedback which simplifies microphone and speaker placement and greatly improves systems using conventional microphones.

Connections: The microphone cartridge element is connected across terminals 2 and 3 in the microphone receptacle. The microphone case is connected to terminal 1.

In the cable plug, pins 1 and 2 are connected to the shield of the cable, and the inner conductor is connected to number 3 pin. Therefore, one side of the cartridge element is grounded to the case and shield while the microphone is in operation.

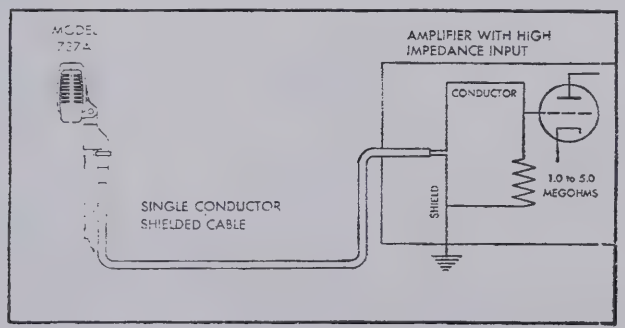

Fig. A. Connections for Model 737A Microphone.

The inner conductor or "hot" lead should be connected to the grid of the first tube in the amplifier across a load resistance of 5 megohms. Input resistances as low as 1 megohm may be used if necessary, but higher values are recommended because of the better low frequency response which will result. The shield or ground should be connected to the chassis. See Fig. A. The shield, chassis or amplifier should be securely connected to a water pipe or similar ground to prevent shock hazard during operation of the amplifying system.

Added lengths of connecting cable will be accompanied by a decrease in output level. There is no frequency discrimination introduced by the cable, regardless of length. Most modern high-gain amplifiers have a sufficient margin of gain to make up for output level decreases due to additional cable lengths. If the amplifier does not have the necessary gain a pre-amplifier at the microphone or near the main amplifier is suggested. Pre-amplifiers with low impedance output are recommended if the main amplifier system has a low impedance transformer or mixer input. Cable should be of high quality and low capacity. The inner leads should be soldered and insulated. Metal braid sleeve or a serve of fine wire should be soldered between the shields of the cables to complete the shielding.

Operation: No polarizing voltage is required for crystal microphones.

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—OVER—

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Crystal microphones may be seriously damaged if accidentally connected to loudspeaker or power supply outlets carrying high voltage. Check your connections carefully.

Shure crystal products are suitably moisture-protected to withstand the action of all ordinary atmospheric conditions in temperate climates. Rochelle salt crystal deteriorates rapidly when a temperature of 135° F. is reached. It is, in general, not safe to store or subject these crystals for prolonged periods of time to temperatures in excess of 115-120° F., or to extremely high humidity as this may result in a progressive deterioration of the crystal.

When used near a radio transmitter, use minimum length of cable consistent with placement requirements. Careful grounding of the cable shield is advisable.

As a precaution against mechanical vibration pickup, the unit is floated in sponge rubber inside the microphone case.

No special precautions, beyond ordinary care, is necessary in the operation of the "Monoplex" Microphone. It will operate efficiently and dependably under all ordinary conditions.

Acoustic Considerations: The expression "Super-Cardioid type response" simply means that the polar characteristic of the microphone approximates a modified cardioid of revolution. There is a wide, useful pickup angle at the front of the microphone. The rear response is down of the order of 15 db over a broad range of frequencies and reduces pickup of random energy by 73%.

The Shure "Monoplex" employs the same type of acoustic phase shifting network used in the highest cost Shure Microphones. The true uni-directional "super-cardioid" characteristic of the "Monoplex" allows highly satisfactory operation under adverse conditions of background noise and reverberation where a conventional microphone would be practically useless. By directing the rear side of the microphone towards the audience or other source of interfering sound, pickup can be concentrated on the desired source. The microphone can be placed close to reflecting surfaces without objectionable effects if the rear side of the microphone is toward the reflecting surface. This is particularly valuable in small studios or rooms.

It is desirable to experiment with microphone placement and orientation in order to secure the greatest benefits from the uni-directional characteristic.

Specifications: Voltage Sensitivity: 2.25 millivolts per microbar at end of 20 foot cable across 1 to 5 megohms. This is equivalent to 53 db below 1 volt per microbar.
RMA Microphone Rating GM (Sensitivity) —153 db
RMA Standard SE-105, August, 1949.

Internal Output Impedance: Equivalent to a 1000 micro-microfarad condenser.

Recommended Load Impedance: 1 to 5 megohms.

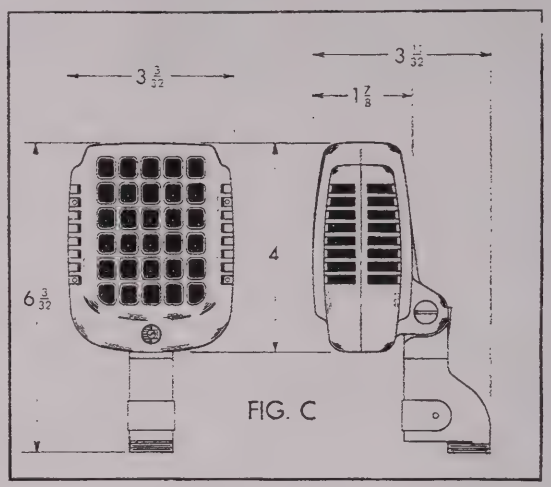

FIG. C

Height, Overall	*	6 3/32
Height, Case	*	4
Width	*	3 3/32
Thickness	*	1 7/8
Finish		Satin Chrome Plate
Cable		20 ft. Single Conductor
Net Weight, Less Cable		1 1/8 lb.
Shipping Weight		2 1/4 lbs.
Code Word		RUMON

*See Fig. C.

Guarantee: Each microphone is guaranteed to be free from electrical and mechanical defects for a period of one year from date of shipment from the factory, provided all instructions are complied with fully. In case of damage, return the microphone to the factory for repairs. Our guarantee is voided if the microphone case is opened.

License Notice: Shure patents issued or pending. Licensed under patents of the Brush Development Company.

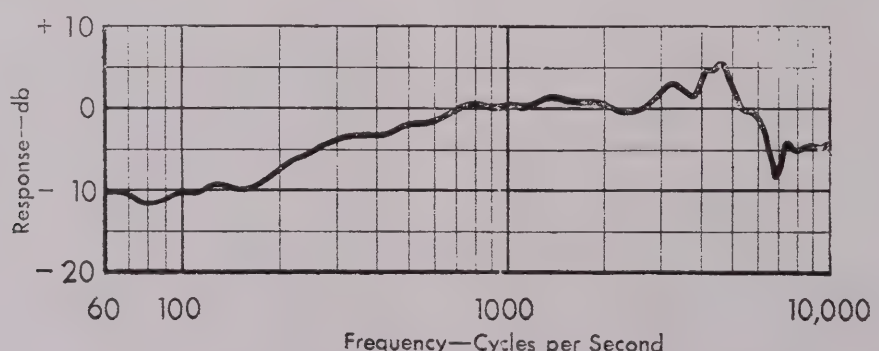

Fig. B. Front Response-Frequency Characteristic Model 737A Microphone.

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MICROPHONES AND ELECTRONIC COMPONENTS

DATA SHEET

S39A, S37A, S33B DESK STANDS

MODEL S39A VIBRATION-ISOLATION STAND

Model S39A with Shure 578 OMNIDYNE and swivel adapter.

The Model S39A Vibration-Isolation Stand features a low profile and excellent shock isolation. It is designed to prevent external shock and floor or table vibrations from reaching the microphone. The stand is especially suitable for sportscasting, conference table use, installation across the front of stages and platforms and conditions of severe mechanical vibration.

The Model S39A weighs 964 grams (2⅛ lb); overall dimensions are shown in Figure 1.

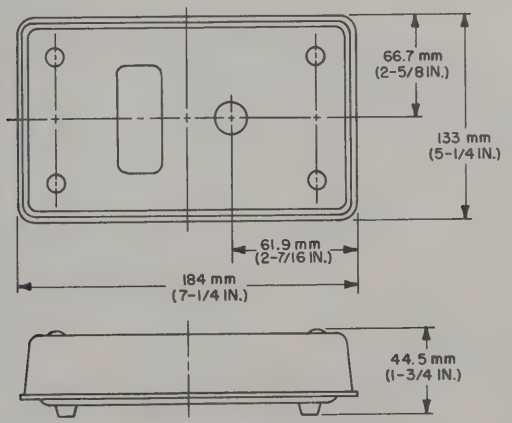
The Model S39A Stand is designed for all Shure microphones and swivel adapter assemblies. An extension adapter is furnished to increase the height of certain microphones for cable-connector clearance.

The swivel adapters or extension adapters are fastened to the S39A Stand by means of the brass attachment screw, supplied. This screw enters from the bottom of the stand base and should be tightened with a large screwdriver.

After installation, if the microphone does not face forward properly, the screw may be loosened and the microphone or swivel adapter positioned as required. Re-tighten the screw securely.

Microphones weighing over 1 kilogram (2¼ lb); are not recommended for use with the S39A Stand because excessive weight may reduce the effectiveness of the isolation.

Lightweight microphones, such as the Shure Model 578 OMNIDYNE can be mounted on the Model S39A Stand. Heavier microphones, such as Shure UNIDYNE® II Models, should be mounted on the extension adapter furnished to increase the height for cable-connector clearance.



OVERALL DIMENSIONS
FIGURE 1

MODEL S37A DESK STAND

The S37A Desk Stand features a low profile stable base for use with microphones with swivel connector assemblies (as shown in Figure 2) and with microphones using swivel adapters (as shown in Figure 3). The Model S37A weighs 681 grams (1½ lb); overall dimensions are shown in Figure 4. The S37A is supplied in a non-reflective gray finish.

To assemble, proceed as follows:

A. For use with swivel connector assemblies, see Figure 2.

1. Place microphone in the recess at top of base. Fasten microphone to base by means of the large brass attachment screw, supplied. This screw enters from the bottom of the base and should be tightened with a large screwdriver.

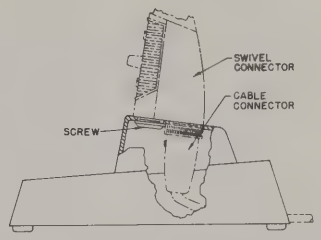


FIGURE 2

NOTE: Cover plate furnished is not needed with Shure swivel connector type microphones.

2. Insert cable-connector plug into microphone receptacle.
3. Place cable in groove in the bottom rear of the base. Clamp cable to the base by means of the clamping strip and two machine screws which are furnished.

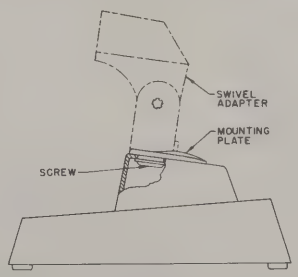


FIGURE 3

B. For use with swivel adapters, such as A25B, see Figure 3.

1. Place mounting plate (furnished) in recess at top of base. Place swivel adapter on top of mounting plate and fasten adapter with the large brass attachment screw. Projection on swivel adapter fits into notch of mounting plate. Tighten securely with large screwdriver.

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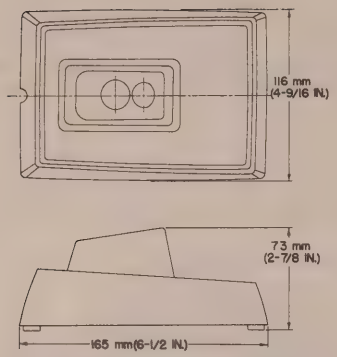
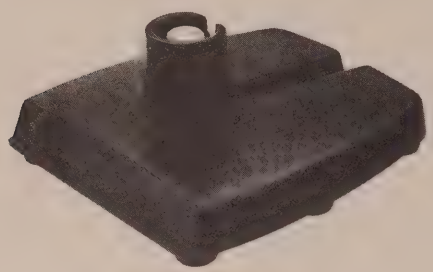


OVERALL DIMENSIONS
FIGURE 4

MODEL S33B DESK STAND



This desk stand has a low silhouette and a high-quality stable base for rock-steady support of any microphone with a swivel adapter having a $^5/_8$"-27 thread. The stand is also intended for use with some Shure microphones with swivel connector assemblies having receptacles that mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent connectors.

The stand weighs 1.14 kilograms (2½ lb); overall dimensions are shown in Figure 7.

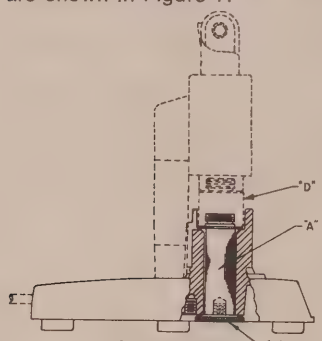


FIGURE 5

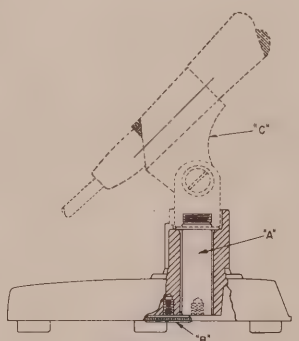


FIGURE 6

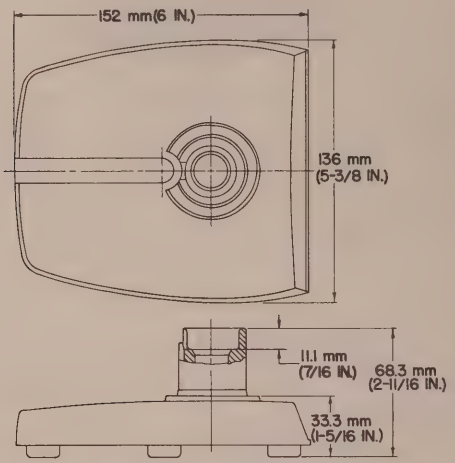
To assemble, proceed as follows (see Figures 5 and 6):

1. Screw shaft "A" into bottom of swivel adapter "C", or screw shaft "A" with extension "D" into bottom of microphone swivel connector. Tighten securely.

   NOTE: As an aid for tightening or loosening, insert a metal rod or large nail through the cross hole in the shaft.

2. Remove thumbscrew "B" from storage in tapped hole under stand (see Figure 6). Insert shaft, with swivel attached, into desk stand. Tighten the thumbscrew into bottom of shaft to lock microphone or swivel adapter to desk stand.

   NOTE: To provide easy and quick removal of the microphone so that it may be used hand-held, do **not** fasten the thumbscrew into the bottom of the shaft. Leave the thumbscrew stored beneath the stand as shipped. In Figure 6, the shaft can be locked to the stand, and the microphone can be slipped out of the swivel adapter for hand-held use.



OVERALL DIMENSIONS
FIGURE 7

GUARANTEE

This Shure product is guaranteed in normal use to be free from mechanical defects for a period of one year from date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor. This guarantee is in lieu of any and all other guarantees or warranties, express or implied, and there shall be no recovery for any consequential or incidental damages.

SHIPPING INSTRUCTIONS

Carefully repack the unit, have it insured, and return it prepaid to:

Shure Brothers Incorporated
Attention: Service Department
222 Hartrey Avenue
Evanston, Illinois 60204

If outside the United States, return the unit to your dealer or Authorized Shure Service Center for repair. The unit will be returned to you prepaid.

SHURE®

222 HARTREY AVE., EVANSTON, IL. 60204 U.S.A.

MICROPHONES AND ELECTRONIC COMPONENTS

A95UF

MODEL A95UF LINE MATCHING TRANSFORMER

This completely reversible transformer matches low-impedance microphones to high-impedance inputs or high-impedance microphones to low-impedance inputs. The transformer permits use of very long microphone cables with either low-impedance or high-impedance microphones. The only requirement is to limit the cable to 4.6m (15 ft) between the high-impedance end of the transformer and the high-impedance microphone or microphone input. Then run balanced lines of any desired length between the low-impedance end of the transformer and the low-impedance microphone or microphone input. The transformer prevents high-frequency loss, level loss, and objectionable pickup of noise or hum. The A95UF is furnished with a three-socket professional audio connector* on the low-impedance end, and with both a standard ¼-inch phone plug and phone jack adapter for the high-impedance end.

*To mate with Cannon XL series, Switchcraft A3 (Q.G.) series, or equivalent.

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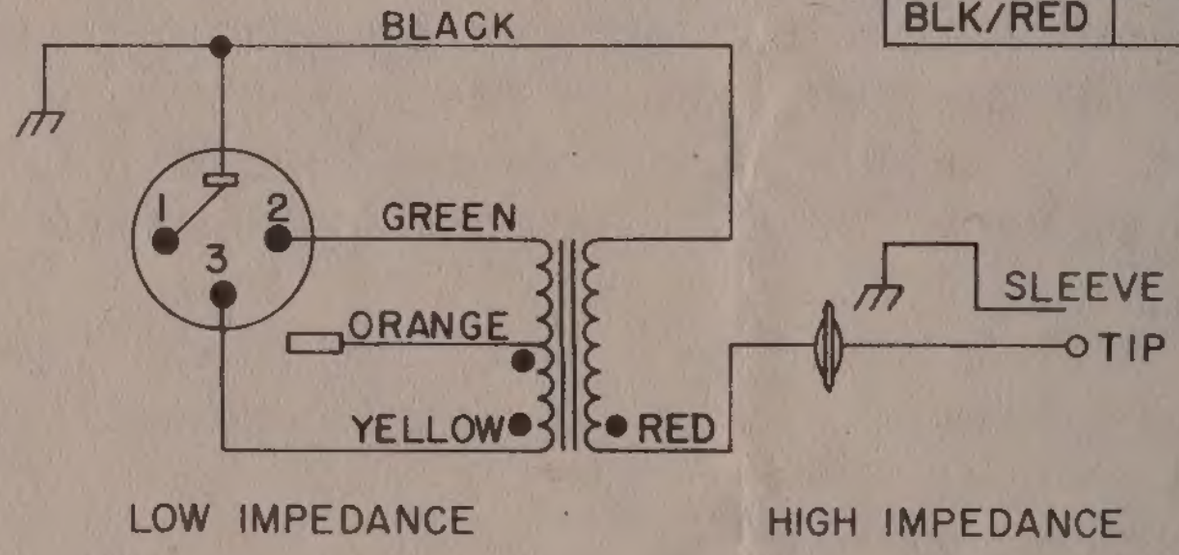
LOW-IMPEDANCE SELECTION

As supplied, the low-impedance end is intended for use with microphones or inputs rated at 75 to 300 ohms. For microphones or inputs rated at 19 to 75 ohms, make the following changes.

1. Remove the low-impedance plug element by turning the screw counterclockwise and withdrawing the element from the case.
2. Unsolder the YELLOW lead from pin 3 and insulate the bare wire at the end of the lead with the insulator from the ORANGE lead.
3. Solder the ORANGE lead to pin 3.
4. Rotate the plug element three turns to twist the leads, and replace the element in the housing. Fasten the screw securely in place (turn clockwise).

IMPEDANCES	
GRN/YEL	75-300 Ω
GRN/ORN	19-75 Ω
BLK/RED	HIGH



SPECIFICATIONS

Frequency Response

Flat, 20 Hz to 20 kHz. Response at 20 Hz no more than 3 dB down from flat

Impedance

Low impedance:	75 to 300 ohms or 19 to 75 ohms
High impedance:	High (41 kilohms with 150-ohm source on 75-to 300-ohm winding)

Dc Resistance

Low impedance:	75 to 300 ohms – 75 ohms 19 to 75 ohms – 37.5 ohms
High impedance:	4300 ohms

Voltage Ratio	**75 to 300 ohms**	**19 to 75 ohms**
Low impedance to high impedance:	+28 dB	+22 dB
High impedance to low impedance:	–28 dB	–22 dB

Maximum Recommended Input Levels

Driving Source Impedance (ohms)	Winding Being Driven	Maximum Level (volts)
33	19 to 75 ohms	0.5
200	75 to 300 ohms	1.0
600	High Impedance	10
5,000	High Impedance	10
33,000	High Impedance	10

Case

Full magnetic shield; steel with gray enamel finish

Dimensions

19 mm (¾ in.) diameter; 89 mm (3-½ in.) long without adapters

GUARANTEE

This Shure product is guaranteed in normal use to be free from electrical and mechanical defects for a period of one year from date of purchase. Please retain proof of purchase date. This guarantee includes all parts and labor. This guarantee is in lieu of any and all other guarantees or warranties, express or implied, and there shall be no recovery for any consequential or incidental damages.

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